The State of Rhode Island Coastal Resources Management Program

As Amended

The State of Rhode Island

Coastal Resources Management Program

As Amended

LEGAL COUNSEL

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This document replaces Chapters 1 through 5 of the program adopted by the Coastal Resources Management Council in 1977.

Other adopted elements of the Rhode Island Coastal Resources Management Program include the Energy Amendments of 1979, Management Procedures, Right-of-Ways to the Shore, Special Area Management Plans for selected areas, and the Guidelines for the Development of Municipal Harbor Management Plans. These documents may be obtained from the Council's offices.

Acknowledgments

Many people devoted time and thought to this document and made significant contributions to its form and content.

John A. Lyons, chairman of the Coastal Resources Management Council, and CRMC's Working Group on Program Revision attended innumerable meetings to review several drafts of this document over a period of two years. The members of the group were Alvaro Freda, Dr. William Miner, Barbara Colt, Malcolm Grant, James Beattie, Frank Geremia, and Lee Whitaker. The entire Council attended many sessions of the Planning and Policy Subcommittee to discuss major policy issues raised by these amendments.

The many years' experience of the Council's staff led to the initial development of the standards listed in Part Three. Special thanks go to Nicholas Pisani, James Parkhurst, Linda Steere, and Gail Chmura, all of whom made substantial contributions to the document.

Various agencies, private groups, and individuals commented on the document during the initial nine-month public review period and made suggestions that are incorporated in the final product. Special thanks are due to Malcolm Grant of the Environmental Management; Daniel Varin, chief of the Statewide Planning Program; Christopher Little of Save the Bay; Kenneth Payne, director of the League of Cities and Towns; Friends of the Waterfront (Newport); the Rhode Island Association of Realtors; and the Rhode Island Marine Trades Association. Over the years, these same groups have made many comments on proposed revisions and have kept active in the review process.

The maps were originally drawn by Marion McHugh and Betsy Watkins. For the intial "Redbook" document (1983), Vicki Desjardins did the final editing, and Larry Pearce was responsible for the layout and design. This new format for the Redbook, the three-ring bound document of the RICRMP, was prepared, edited, and designed by Joanne Moore and Jeff Willis of the Council's staff.

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Additional copies of this publication are available from the Coastal Resources Management Council, Oliver Stedman Government Center, Wakefield, R.I. or 40 Fountain Street, Providence, R.I.

The development of the RICRMP was undertaken in 1973, approved by the CRMC in 1977, and federally-approved in 1978. In 1983, its first five chapters were replaced by this document, commonly referred to as the "Redbook"and initially printed for the Council through the University of Rhode Island's Publication Office (P964 12/83 5M). The Redbook was last printed as a bound document in May of 1990.

This edition of the RICRMP is the first time that the Redbook has been formatted for a three-ring binder. It was printed in June 1996. All revisions to this edition are current as of June 1, 1996.

Three-Ring Original Edition
June 1996

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Step One.
Is a Council Assent Required?

All the activities listed on the vertical axis of Table 1 require a Council Assent if the activities proposed are (1) in Rhode Island's tidal waters; (2) on a shoreline abutting tidal waters or a coastal pond; and/or (3) within the 200-foot contiguous area landward of any coastal feature (coastal beaches, dunes, wetlands, cliffs, bluffs, barriers, embankments, rocky shores, and manmade shorelines).

Persons proposing the following activities extending onto the most inland shoreline feature or its 200 foot contiguous area are required to apply for a Council Assent: subdivisions, cooperatives, or other multi-ownership facilities [of six units or more], or facilities requiring or creating 40,000 sq. ft. or more of parking. Persons proposing the following activities within critical coastal areas, which include the watersheds of poorly flushed areas delineated on maps accompanying this program, are required to apply for a Council Assent: subdivisions, cooperatives, and other multi-ownership facilities [of six (6) units or more]; any structure serviced by an on-site sewage disposal system servicing 2,000 gallons or more per day; any activity which results in the creation of 40,000 sq. ft. or more of impervious surface; construction or extension of municipal or industrial sewage facilities or systems (not connections to individual homes); construction or extension of water distribution systems or supply lines (not connections to individual homes).

Persons proposing selected inland activities anywhere in the state that may require a Council Assent shall request a review of the project to determine whether impacts on the environment of the coastal region are likely and, therefore, whether a Council Assent will be required. These selected inland activities are (1) energy generation, transfer, processing, or storage; (2) chemical processing; (3) minerals extraction; (4) sewage treatment and disposal; or (5) solid waste disposal.

Step Two.
Where Is The Activity or Alteration Being Proposed?

Locate the area where an activity or alteration is proposed on the maps that accompany this Program. Then note the water use category (if an on-land activity is proposed, the adjoining water use category). If the shoreline is designated a Critical Erosion Area, note the average annual erosion rate. In these areas, non-water-dependent structures must set back a distance equivalent to 30 times the annual erosion rate (see Section 140). The prerequisites, standards, and Category B requirements for on-land activities listed in Section 300.1 through 300.15 and in Section 330 of this document apply to both shoreline features and their 200-foot contiguous area.

Identify the shoreline features that may be affected. The maps give some indication of the shoreline features that may be involved, but this must be verified by inspecting the site. The definitions of shoreline features in Part Two of this document will further assist you in identifying what shoreline features are present.

If the proposed activity or alteration is not located in Rhode Island's coastal waters, on or within the 200 foot contiguous area, or a statewide activity listed in Section 320, determine if it is located within a critical coastal area. If the proposed alteration or activity is listed in Section 325, then you will need to apply for a Council Assent.

Step Three.
What Regulations Apply?

The prerequisites, policies, and standards in this Program are regulations that must be met by all persons who undertake alterations and activities under the Council's jurisdiction.

If the alteration proposed is for tidal waters or for a shoreline feature, turn to the appropriate section of Table 1 and match the activity with the water area and shoreline type. The table will tell you if the activity you propose is prohibited or will be processed as a Category A or Category B application. Table 1A lists the review categories for activities proposed in the 200-foot area contiguous to shoreline features.

If the proposed alteration is within a critical coastal area, consult the appropriate Special Area Management Plan for supplemental policies, standards, and requirements. Table 1B lists the review categories for inland activities subject to the requirements of Section 320 or 325.

A. Category A Applications

1. Review the policies in Part Two for the water use and shoreline categories your proposal may affect. These may set limits on what may be permitted or provide guidance on how the work should by undertaken.

2. Turn to the appropriate section in Part Three and (a) note any prerequisites that you must meet before filing for a Council Assent, and (b) review all standards.

When filing a Category A application you must commit yourself to upholding all applicable standards. If you cannot or do not wish to meet one or more standards, you must apply for a variance (Section 120).

3. File your application. If the activity you propose is not starred (*) on Table 1 and you meet all applicable standards, and if all information requirements have been verified by the Council's staff, review of the application will begin. If grounds for a substantive objection (Section 110.3) exist on the proposed site (for example, the presence of rare or endangered species or severe building constraints), a Council member or the Council's staff will recommend review by the full Council, and the application will be put out to public notice.

4. If the activity you propose is starred (*), public notice will be given of your proposal; abutters to the affected property and local and state officials will be notified of your proposal. If one or more substantive objections (see Section 110) are filed within the 30-day notice period, a public hearing on your proposal will be scheduled and a Council subcommittee appointed to hear the objections, review your application, and recommend action to the full Council.

B. Category B Applications

1. Complete 1 and 2 above as for a Category A Assent.

2. Prepare in writing an environmental assessment of your proposal. This must address all items listed in Section 300.1 and any additional requirements for Category B applications listed for the activity in question in the appropriate sections of Part Three. The amount of detail appropriate for each topic will vary depending on the magnitude of the project and the likely impacts. If, in your opinion, some issues do not apply, simply note: "Does not apply."

3. All Category B applications are put out to public notice. A public hearing will be scheduled if one or more substantive objections are filed within the 30-day notice period. A Council subcommittee will review your proposal, the comments prepared by its staff, and all other pertinent materials, and will recommend action to the full Council. If your proposal is uncontested, you may expect Council action within 30 working days of verification by the Council's staff that all informational requirements have been met. The Council shall base its decision on consideration of how your proposal conforms to goals for the shoreline features and water use categories affected, other relevant policies, and the significance of the likely impacts of your proposal on the environment of the coastal region.

The Program's Enabling Legislation (1971) as Amended

Chapter 23 of the General Laws of Rhode Island

Coastal Resources Management Council

46-23-1. Legislative Findings. Creation. The general assembly recognizes and declares that the coastal resources of Rhode Island, a rich variety of natural, commercial, industrial, recreational, and aesthetic assets are of immediate and potential value to the present and future development of this state; that unplanned or poorly planned development of this basic natural environment has already damaged or destroyed, or has the potential of damaging or destroying, the state's coastal resources, and has restricted the most efficient and beneficial utilization of such resources; that it shall be the policy of this state to preserve, protect, develop, and where possible, restore the coastal resources of the state for this and succeeding generations through comprehensive and coordinated long-range planning and management designed to produce the maximum benefit for society from such coastal resources; and that preservation and restoration of ecological systems shall be the primary guiding principle upon which environmental alteration of coastal resources will be measured, judged, and regulated.

That effective implementation of these policies is essential to the social and economic well-being of the people of Rhode Island because the sea and its adjacent lands are major sources of food and public recreation, because these resources are used by and for industry, transportation, waste disposal, and other purposes, and because the demands made on these resources are increasing in number, magnitude, and complexity; and that these policies are necessary to protect the public health, safety, and general welfare. Furthermore, that implementation of these policies is necessary in order to secure the rights of the people of Rhode Island to the use and enjoyment of the natural resources of the state with due regard for the preservation of their values, and in order to allow the general assembly to fulfill its duty to provide for the conservation of the air, land, water, plant, animal, mineral, and other natural resources of the state, and to adopt all means necessary and proper by law to protect the natural environment of the people of the state by providing adequate resource planning for the control and regulation of the use of the natural resources of the state and for the preservation, regeneration, and restoration of the natural environment of the state.

That these policies can best be achieved through the creation of a coastal resources management council as the principal mechanism for management of the state's coastal resources.

46-23-2 Coastal Resources Management Council created - Appointment of members . (a) There is hereby created the coastal resources management council.

(1) The coastal resources management council shall consist of sixteen (16) members, two (2) of whom shall be members of the house of representatives, at least one of the members shall represent a coastal municipality, appointed by the speaker, two (2) of whom shall be members of the senate, each of whom shall represent a coastal municipality, appointed by the lieutenant governor, two (2) of whom shall be from the general public appointed by the speaker of the house for a term of two (2) years, two (2) of whom shall be from a coastal municipality appointed by the speaker of the house for a term of three (3) years.

(2) In addition, four (4) of the members shall be appointed or elected officials of local government appointed by the governor, one of whom shall be from a municipality of less than twenty-five thousand (25,000) population, appointed to serve until January 31, 1972, one of whom shall be from a coastal municipality of more than twenty-five thousand (25,000) population appointed to serve until January 31, 1973, and one of whom shall be from a coastal municipality of less than twenty-five thousand (25,000) population appointed to serve until January 31, 1974, and one of whom shall be from a coastal community of more than twenty-five thousand (25,000) population appointed to serve until January 31, 1975, the populations are to be determined by the latest federal census; all members shall serve until their successors are appointed and qualified; during the month of January, the governor shall appoint a member to succeed the member whose term will then next expire for a term of four (4) years commencing on the first day of February then next following and until his or her successor is named and qualified; each municipal appointment shall cease if the appointed or elected official shall no longer hold or change the office which he or she held upon appointment, and further, each appointee shall be eligible to succeed him or herself.

(3) Three (3) members shall be appointed by the governor from the public, with the advice and consent of the senate, one of whom shall serve until January 1, 1972, one of whom shall serve until January 1, 1973 and one of whom shall serve until January 1, 1974; the members and their successors shall represent a coastal community.

(4) All members shall serve until their successors are appointed and qualified; during the month of January, the governor shall appoint with advice and consent of senate, a member to succeed the members whose term will then next expire for a term of three (3) years commencing on the first day of February next following and until his or her successor is named and qualified. A member shall be eligible to succeed him or herself. No more than two (2) persons on the council shall be from the same community.

(5) Appointments shall first be made by the governor, then by the lieutenant governor, and then by the speaker. A vacancy other than by expiration shall be filled in like manner as an original appointment but only for the unexpired portion of the term. The

commissioner of the environmental protection branch or his or her designee within the department of environment shall serve ex officio.

(b) In addition to the foregoing voting members, the council shall include a varying number of other members who shall serve in an advisory capacity without the right to vote and who shall be invited to serve by either the governor or the voting members. These advisory members shall represent the federal agencies such as the navy, coast guard, corps of engineers, public health service, and the federal water pollution control administration, and such regional agencies as the New England river basins commission and the New England regional commission and another group or interest not otherwise represented. The council shall have authority to form committees of other advisory groups as needed from both its own members and others.

46-23-2.1 Members - Term of office. (a) The term of office of the appointed members shall be three (3) years, only so long as the members shall remain eligible to serve on the council under the appointment authority.

(b) The members shall be eligible to succeed themselves for one additional term only. Thereafter, no former member shall be eligible to be reappointed for a period of two (2) Years.

(c) Elected for appointed municipal officials shall hold seats on the council, only so long as they remain in their elected or appointed office. Members of the senate and house shall serve at the pleasure of the appointing authority and shall not be subject to the provisions of subsection (b) of this section.

(d) A vacancy other than by expiration shall be filled in the manner of the original appointment but only for the unexpired portion of the term. The appointing authority shall have the power to remove its appointee for just cause.

(e) This section shall take effect on July 1, 1985 and shall apply prospectively to those members currently serving on the council whose terms expire thereafter.

46-23-4. Officers of the council; quorum and vote required for action. The governor, upon the appointment of the appointed members of the council, shall select from the appointed members a chairperson and vice chairperson. The council shall thereupon select a secretary from among its membership or staff. The council may engage such staff, including legal counsel, as it deems necessary. A quorum shall consist of seven (7) members of the council. A majority vote of those present shall be required for action.

46-23-4.1. The commissioner of coastal resources management. The council shall engage a commissioner of coastal resources management who shall be an employee of the council and who shall not be a member of the council. The commissioner shall coordinate and liaison with the director of the environment, and his or her staff shall be at the same staff level as the other commissioners and shall work directly with other commissioners. The commissioner of coastal resources management shall be in the unclassified service. The duties and powers of the commissioner of coastal resources management shall be determined by the council. The council shall not engage a commissioner of coastal resources management for more than five (5) years; provided, however, that the council may renew its contract with the commissioner of coastal resources management.

46-23-5. Expenses of members. (a) The members of the council shall be paid fifty dollars ($50.00) per meeting as compensation except for the chairperson who shall be paid seventy-five dollars ($75.00) per meeting as compensation; the members and chairperson shall be reimbursed for their actual expenses necessarily incurred in the performance of their duties.

(b) Any member other than the chairperson who shall act as chairperson, or any member other than the chairperson who shall chair any subcommittee of the council, shall not receive the additional compensation paid to the chairman.

46-23-6. Powers and duties. In order to properly manage coastal resources the council shall have the following powers and duties:

(A) Planning and management.

(1) The primary responsibility of the council shall be the continuing planning for and management of the resources of the state's coastal region. The council shall be able to make any studies of conditions, activities, or problems of the state's coastal region needed to carry out its responsibilities.

(2) The resources management process shall include the following basic phases:

(a) Identify all of the state's coastal resources, water, submerged land, air space, fin fish, shellfish, minerals, physiographic features, and so forth.

(b) Evaluate these resources in terms of their quantity, quality, capability for use, and other key characteristics.

(c) Determine the current and potential uses of each resource.

(d) Determine the current and potential problems of each resource.

(e) Formulate plans and programs for the management of each resource, identifying permitted uses, locations, protection measures, and so forth.

(f) Carry out these resources management programs through implementing authority and coordination of state, federal, local, and private activities.

(g) Formulation of standards where these do not exist, and reevaluation of existing standards.

(3) An initial series of resources management activities shall be initiated through this basic process, then each phase shall continuously be recycled and used to modify the council's resources management programs and keep them current.

(4) Planning and management programs shall be formulated in terms of the characteristics and needs of each resource or group of related resources. However, all plans and programs shall be developed around basic

standards and criteria, including:

(a) The need and demand for various activities and their impact upon ecological systems.

(b) The degree of capability of various activities.

(c) The capability of coastal resources to support various activities.

(d) Water quality standards set by the department of health.

(e) Consideration of plans, studies, surveys, inventories, and so forth prepared by other public and private sources.

(f) Consideration of contiguous land uses and transportation facilities.

(g) Whenever possible consistency with the state guide plan.

(B) Implementation.

(1) The council is authorized to formulate policies and plans and to adopt regulations necessary to implement its various management programs. Upon formulation of the plans and regulations, the council shall, prior to adoption, submit the proposed plans or regulations to the director of the environment for the director's review. The director shall review and submit comments to the council within thirty (30) days of submission to the director by the council. The council shall consider the director's comments prior to adoption of any plans or regulations.

(2) Any person, firm, or governmental agency proposing any development or operation within, above, or beneath the tidal water below the mean high water mark, extending out to the extent of the state's jurisdiction in the territorial sea, shall be required to demonstrate that its proposal would not:

(i) Conflict with any resources management plan or program;

(ii) Make any area unsuitable for any uses or activities to which it is allocated by a resources management plan or program adopted by the council; or

(iii) Significantly damage the environment of the coastal region. The council shall be authorized to approve, modify, set conditions for, or reject any such proposal.

(3) The authority of the council over land areas (those areas above the mean high water mark) shall be limited to two hundred feet (200') from the coastal physiographic feature or to that necessary to carry out effective resources management programs. This shall be limited to the authority to approve, modify, set conditions for, or reject the design, location, construction, alteration, and operation of specified activities or land uses when these are related to a water area under the agency's jurisdiction, regardless of their actual location. The council's authority over these land uses and activities shall be limited to situations in which there is a reasonable probability of conflict with a plan or program for resources management or damage to the coastal environment. These uses and activities are:

(a) Power generating and desalination plants.

(b) Chemical or petroleum processing, transfer, or storage.

(c) Minerals extraction.

(d) Shoreline protection facilities and physiographical features, and all directly associated contiguous areas which are necessary to preserve the integrity of the facility and/or features.

(e) Coastal wetlands and all directly associated contiguous areas which are necessary to preserve the integrity of the wetlands. For the purpose of this chapter, a "coastal wetland" shall mean any salt marsh bordering on the tidal waters of this state, whether or not the tidal waters reach the littoral areas through natural or artificial watercourses, and those uplands directly associated and contiguous thereto which are necessary to preserve the integrity of that marsh. Marshes shall include those areas upon which grow one or more of the following: smooth cordgrass (spartina alterniflora), salt meadow grass (spartina patens), spike grass (distichlis spicata), black rush (juncus gerardi), saltworts (salicornia spp.), sea lavender (limonium carolinianum), saltmarsh bulrushes (scirpus spp.), hightide bush (iva frutescens), tall reed (phragmites communis), tall cordgrass (spartina pectinata), broadleaf cattail (typha latifolia), narrowleaf cattail (typha angustifolia), spike rush (eleocharis rostellata), chairmaker's rush (scirpus amercana), creeping bentgrass (agrostis palustris), sweet grass (hierochloe odorata), and wild rye (etlymus virginicus).

(f) Sewage treatment and disposal and solid waste disposal facilities.

(C) *Coordination.* The council shall have the following coordinating powers and duties:

(1) Functioning as a binding arbitrator in any matter of dispute involving both the resources of the state's coastal region and the interests of two (2) or more municipalities or state agencies.

(2) Consulting and coordinating actions with local, state, regional, and federal agencies and private interests.

(3) Conducting or sponsoring coastal research.

(4) Advising the governor, the general assembly, and the public on coastal matters.

(D) *Operations.* The council shall be authorized to exercise the following operating functions, which are essential to management of coastal resources:

(1) Issue, modify, or deny permits for any work in, above, or beneath the areas under its jurisdiction, including conduct of any form of aquaculture.

(2) Issue, modify, or deny permits for dredging, filling, or any other physical alteration of coastal wetlands and all directly related contiguous areas which are necessary to preserve the integrity of the wetlands.

(3) Grant licenses, permits, and easements for the use of coastal resources which are held in trust by the state for all its citizens, and impose fees for private use of these resources.

(4) Determining the need for and establishing pierhead, bulkhead, and harbor lines.

(5) Enforcing and implementing riparian rights in the tidal water after judicial decisions.

(E) *Rights-of-way.*

(1) The council shall be responsible for the designation of all public rights-of-way to the tidal water areas of the state, and shall carry on a continuing discovery of appropriate public rights-of-way to the tidal water areas of the state.

(2) The council shall maintain a complete file of all official documents relating to the legal status of all public rights-of-way to the tidal water areas of the state.

(3) The council shall have the power to designate for acquisition and development, and posting, and all other functions of any other department for tidal rights-of-way and land for tidal rights-of-way, parking facilities, and other council related purposes.

Further, the council shall have the power to develop and prescribe a standard sign to be used by the cities and towns to mark designated rights-of-way.

(4) In conjunction herewith, every state department controlling state-owned land close to or adjacent to discovered rights-of-way is authorized to set out the land, or so much thereof as may be deemed necessary for public parking.

(5) No such use of land for public parking shall conflict with existing or intended use of the land, and no improvement shall be undertaken by any state agency until detailed plans have been submitted to and approved by the governing body of the local municipality.

(6) In designating rights-of-way, the council shall consider the following matters in making its designation:

(a) Land evidence records;

(b) The exercise of domain over the parcel such as maintenance construction, or upkeep;

(c) The payment of taxes;

(d) The creation of a dedication;

(e) Public use;

(f) Any other public record or historical evidence as maps and street indexes;

(g) Other evidence as set out in § 42-35-10.

(7) A determination by the council that a parcel is a right-of-way shall be decided by substantial evidence.

(8) The council shall be notified whenever by the judgement of the governing body of a coastal municipality, a public right-of-way to tidal water areas located in such municipality has ceased to be useful to the public, and such governing body proposes an order of abandonment of such public right-of-way. Said notice shall be given not less than sixty (60) days prior to the date of such abandonment.

(F) *Pre-existing residential boating facilities.*

(1) The council is hereby authorized and empowered to issue assent for pre-existing residential boating facilities constructed prior to January 1, 1985. These assents may be issued for pre-existing residential boating facilities, even though such facilities do not meet current standards and policies of the council, provided, however, that the council finds that such facilities do not pose any significant risk to the coastal resources of the state of Rhode Island and do not endanger human safety.

(2) In addition to the above criteria, the applicant shall provide clear and convincing evidence that:

(a) The facility existing in substantially the same configuration as it now exists prior to January 1, 1985;

(b) The facility is presently intact and functional; and

(c) The facility presents no significant threat to the coastal resources of the state of Rhode Island or human safety.

(3) The applicant, to be eligible for this provision, shall apply no later than January 31, 1998.

(4) The council is directed to develop rules and regulations necessary to implement this subsection (F).

(5) It is the specific intent of this subsection to require that all pre-existing residential boating facilities constructed on January 1, 1985 or thereafter conform to this chapter and the plans, rules and regulations of the council.

46-23-6.1. Newport "Cliff Walk" - Public right-of-way - legal studies. The council is hereby directed to carry out any and all legal studies which it shall deem necessary in order to designate the Newport "Cliff Walk", so called, as a public right-of-way pursuant to § 46-23-6(E).

46-23-6.2. Abandonment of rights of way. No city or town shall abandon a right of way designated as such by the council unless the council approved the abandonment.

46-23-7. Violations. (a) (1) In any instances wherein there is a violation of the coastal resources management program, or a violation of regulations or decisions of the council, the commissioner of coastal resources management shall have the power to order any person to cease and desist or to remedy any violation of any provisions of this chapter, or any rule regulation, assent, order, or decision of the council whenever the commissioner of coastal resources management shall have reasonable grounds to believe that such violation has occurred.

(2) Council staff, conservation officers within the department of environment, and state and municipal police shall be empowered to issue written cease and desist orders in any instance where activity is being conducted which constitutes a violation of any provisions of this chapter, or any rule, regulation, assent, order, or decision of the council.

(3) Conservation officers within the department of environment, council staff, and state and municipal police shall have authority to apply to a court of competent jurisdiction for a warrant to enter on private land to investigate possible violations of this chapter; provided that they have reasonable grounds to believe that a violation has been committed, is being committed, or is about to be committed.

(b) Any order or notice issued pursuant to subsection (a) shall be eligible for recordation under chapter 13 of title 34, and shall be recorded in the land evidence records in the city/town wherein the property subject to the order is located, and any subsequent transferee of the property shall be responsible for complying with the requirements of the order and notice.

(c) The coastal resources management council shall discharge of record any notice filed pursuant to

subsection (b) within thirty (30) days after the violation has been remedied.

46-23-7.1. Administrative penalties. Any person who violates, or refuses or fails to obey, any notice or order issued pursuant to § 46-23-7(a); or any assent, order, or decision of the council, may be assessed an administrative penalty by the chairperson or executive director in accordance with the following:

(i) The chairperson or executive director is authorized to assess an administrative penalty of not more than one thousand dollars ($1,000) for each violation of this section, and is authorized to assess additional penalties of not more than one hundred dollars ($100) for each day during which this violation continues after receipt of a cease and desist order from the council pursuant to § 46-23-7(a), but in no event shall the penalties in an aggregate exceed five thousand dollars ($5,000). Prior to the assessment of a penalty under this subdivision, the property owner or person committing the violation shall be notified by certified mail or personal service that a penalty is being assessed. The notice shall include a reference to the section of the law, rule, regulation, assent, order or permit condition violated; a concise statement of the facts alleged to constitute the violation; a statement of the amount of the administrative hearing.

(ii) The party shall have twenty-one (21) days from receipt of the notice within which to deliver to the council a written request for a hearing. This request shall specify in detail the statements contested by the party. The executive director shall designate a person to act as hearing officer. If no hearing is requested, then after the expiration of the twenty-one (21) day period, the council shall issue a final order assessing the penalty specified in the notice. The penalty is due when the final order is issued. If the party shall request a hearing, any additional daily penalty shall not commence to accrue until the council issues a final order.

(iii) If a violation is found to have occurred, the council may issue a final order assessing not more than the amount of the penalty specified in the notice. The penalty is due when the final order is issued.

(iv) The party may within thirty (30) days appeal the final order of fine assessed by the council to the superior court which shall hear the assessment of the fine de novo.

46-23-7.2. Proceedings for enforcement. The superior court shall have jurisdiction to enforce the provisions of this chapter, the coastal resource management program, or any rule, regulations, assent, or order issued pursuant thereto. Proceedings under this section may follow the course of equity, and shall be instituted and prosecuted in the name of and at the direction of the chairperson and council by the attorney general or counsel designated by the council. Proceedings provided in this section shall be in addition to, and may be utilized in lieu of, other administrative or judicial proceedings authorized by this chapter.

46-23-7.3. Criminal penalties. Any person who knowingly violates any provision of this chapter, the coastal resources management program, or any rule, regulation, assent, or order shall be guilty of a misdemeanor, and, upon conviction thereof shall be fined not more than five hundred dollars ($500) or by imprisonment of not more than three (3) months or both; and each day the violation is continued or repeated shall be deemed a separate offense.

46-23-7.4. Penalty for blocking or posting of rights-of-way. Any person who shall post or block any tidal water, public right-of-way, as designated by the council, shall be punished by a fine not exceeding five hundred dollars ($500) or by imprisonment for not more than three (3) months or both; and each day the posting or blocking continues or is repeated shall be deemed a separate offense. The chairperson of the council, through council's legal counsel or the attorney general, may apply to any court of competent jurisdiction for an injunction to prevent the unlawful posting or blocking of any tidal water, public right-of-way.

46-23-7.5. Prosecution of criminal violations. The chairperson and anyone designated by the chairperson, without being required to enter into any recognizance or to give surety for cost, may institute proceedings in the name of the state. It shall be the duty of the attorney general and/or the solicitor of the city or town in which the alleged violation has occurred to conduct the prosecution of all the proceedings. The chairperson may delegate his or her authority to bring prosecution by complaint and warrant to any law enforcement officials authorized by law to bring complaints for the issuance of search or arrest warrants pursuant to chapters 5 and 6 of title 12.

46-23-8. Gifts, grants, and donations. The council is authorized to receive any gifts, grants, or donations made for any of the purposes of its program, which shall be deposited as general revenues, and to disburse and administer the gifts, grants, or donations amounts appropriated in accordance with the terms thereof. The council is authorized to receive any sums provided by an applicant for use by the council in its hearing process, which shall be deposited as general revenues, and to disburse and administer the general revenue amounts appropriated in accordance with the rules and regulations promulgated by the council.

46-23-9. Subpoena. The council is hereby authorized and empowered to summon witnesses and issue subpoenas in substantially the following form:

Sc.

To_____of_____greeting:

You are hereby required, in the name of the state of Rhode Island and Providence Plantations, to make your appearance before the commission on _____ in the _____city of _____on the ____ day of _____ to give evidence of what you know relative to a matter upon investigation by the commission on _____ and produce and then and

there have and give the following:

Hereof fail not, as you will answer to default under the penalty of the law in that behalf made and provided.

Dated at _____ the _____ day of _____ in the year _____.

46-23-10. Cooperation of departments. All other departments and agencies and bodies of state government are hereby authorized and directed to cooperate with and furnish such information as the council shall require.

46-23-11. Rules and regulations. The rules and regulations promulgated by the council shall be subject to the Administrative Procedures Act.

46-23-12. Representation from coastal communities. Upon the expiration of a term of a member appointed by the governor, as an appointed or elected official of local government from a coastal municipality as set out in § 46-23-2, the governor shall appoint an appointed or elected official of a coastal municipality which, at the time of the governor's appointment, has no appointed or ex officio representation on the council.

46-23-13. Application and hearing fees. The council shall be authorized to establish reasonable fees for applications and hearings. All fees collected by the council, including fees collected for leases, shall be deposited as general revenues. The state controller is hereby authorized and directed to draw his or her orders upon the general treasurer for payment of such sum or sums as may be necessary from time to time and upon receipt by him or her of duly authenticated vouchers presented by the commissioner of coastal resources management.

46-23-14. Expert testimony. The council shall be authorized to engage its own expert and outside consultants, and the council shall be empowered to use that testimony in making its decisions.

46-23-15. Federal grants and interstate cooperation. The council is authorized to accept any federal grants. It is further given the power to administer land and water use regulations as necessary to fulfill their responsibilities under the Federal Coastal Zone Management Act (16 U.S.C. §1451 et seq.) and to acquire fee simple and less than fee simple interests under any federal or state program. The council is authorized to coordinate and cooperate with other states in furtherance of its purposes. The council may extend those grants and appropriations. The coastal resources management council for the purposes of the federal Coastal Zone Management Act (16 U.S.C. § 1451 et seq.) is the coastal zone agency under sections 301 through 313, inclusive, and sections 318 and 6217 of said act.

46-23-15.1 Coordination of harbor safety and enforcement patrols. Coastal municipalities which share a common boundary along their public waters may enter into a binding memorandum of agreement allowing for harbormasters and other officials charged with enforcement of harbor management plan harbor ordinances from one coastal municipality to enforce the harbor ordinances of the bordering coastal municipality upon the public waters of the bordering coastal municipality when the coastal municipalities have harbor management plans approved by the coastal resources management council and the memorandum of agreement is approved by the respective town or city councils. This binding memorandum of agreement shall specify how each coastal municipality is to receive any fines collected under this reciprocal enforcement agreement and the jurisdiction in which any disputes arising out of this reciprocal enforcement agreement shall be litigated.

46-23-16. Length of permits, licenses, and easements. The council is authorized to grant permits, licenses, and easements for any term of years or in perpetuity. The division of coastal resources of the department of the environment shall transfer all of the records and files of the former division of harbours and rivers to the council.

46-23-17. Annual progress report on rights-of-way. Within ninety (90) days after the end of each fiscal year, the council shall submit a written progress report on the development of public rights-of-way to the tidal water areas of the state, to the state planning council, the department of environmental management, and the joint committee on the environment, for review, evaluation, and recommendation of the program's suitability, relevance to the recreation element of the state guide plan, and impact on the natural resources of the state. The report shall also provide detailed records of expenditures and a proposed schedule of future projects.

46-23-18. Dredging activities prohibited without permission of council. (a) No person, firm, or corporation shall, without a permit issued by the coastal resources management council, dredge beneath the waters or construct a marina within two thousand feet (2000') of a shellfish management area as defined by rules and regulations of the department of environmental management.

(b) Any person, firm, or corporation desiring to conduct either of the activities specified in subsection (a) shall file an application with the coastal resources management council upon forms furnished by coastal resources management council.

(i) A hearing shall be held on the application within thirty (30) days of filing and, if at the conclusion of the hearing, the council is satisfied that there will be no adverse impact upon the environment or natural resources of the state as a result of the activities, the coastal resources management council shall grant the permit requested.

(ii) The applicant shall bear the burden of proving that there will be no adverse impact upon the environment or natural resources of the state, and the coastal resources management council shall be empowered to deny the application if the applicant does

not demonstrate, in addition to the other requirements of this chapter, that the activity will not adversely affect any shellfish management area as designated by the department of environmental management or the marine fisheries council.

46-23-20. Administrative hearing. All contested cases, all contested enforcement proceedings, and all contested administrative fines shall be heard by the administrative hearing officers, or by subcommittees as provided in § 46-23-20.1, pursuant to the regulations promulgated by the council, provided, however, that no proceeding and hearing prior to the appointment of the hearing officers shall be subject to the provisions of this section. Notwithstanding the foregoing, the commissioner of coastal resources management shall be authorized, in his or her discretion, to resolve contested licensing and enforcement proceedings through informal disposition pursuant to regulations promulgated by the council.

46-23-20.1. Hearing officers - Appointment - Qualifications - Compensation. (1) The governor, with the advise and consent of the state, shall appoint two (2) hearing officers who shall be attorneys-at-law, who, prior to their appointment, shall have practiced law for a period of not less than five (5) years for a term of five (5) years, provided, however, that the initial appointments shall be as follows: One hearing officer shall be appointed for a term of three (3) years and one hearing officer shall be appointed for a term of five (5) years. The appointees shall be addressed as hearing officers.

(2) The governor shall designate one of the hearing officers as chief hearing officer. The hearing officers shall hear proceedings as provided by this section, and the council, with the assistance of chief hearing officer, may promulgate such rules and regulations as shall be necessary or desirable to effect the purposes of this section.

(3) A hearing officer shall be devoted full time to these administrative duties, and shall not otherwise practice law while holding office nor be a partner nor an associate of any person in the practice of law.

(4) Compensation for hearing officers shall be determined by the unclassified pay board.

(5) *Appointments of subcommittee.* Whenever the chairperson of the coastal resources management council or, in the absence of the chairperson, the commissioner of coastal resources makes a finding that the hearing officers are otherwise engaged and unable to hear a matter in a timely fashion, he or she may appoint a subcommittee which will act as hearing officers in any contested case coming before the council. The subcommittee shall consist of at least one member, provided, however, that in all contested cases an additional member shall be a resident of the coastal community affected. The city or town council of each coastal community shall, at the beginning of its term of office, appoint a resident of that city or town to serve as an alternate member of the aforesaid subcommittee should there be no existing member of the coastal resources management council from that city or town available to serve on the subcommittee. Any member of the subcommittee actively engaged in hearing a case shall continue to hear the case, even though his or her term may have expired, until the case is concluded and a vote taken thereon. Hearings before subcommittees shall be subject to all rules of practice and procedure as govern hearings before hearing officers.

46-23-20.2. Clerk. The commissioner of coastal resources or his or her designee shall serve as clerk to the hearing officers. The clerk shall have general charge of the office, keep a full record of proceedings, file and preserve all documents and papers, prepare such papers and notices as may be required, and perform such other duties are required. The commissioner shall have the power to issue subpoenas for witnesses and documents and to administer oaths in all cases before any hearing officer or pertaining to the duties of his or her office.

46-23-20.3. Pre-hearing procedure - Depositions - Exhibits - Formulating issues - Other procedures. (1) Prior to the commencement of any hearing, the hearing officer may in his or her discretion direct the parties or their attorneys to appear before him or her for such conferences as shall be necessary. At the conferences, the hearing officer may order any party to file, prior to the commencement of any formal hearing, exhibits that the party intends to use in the hearing, and the names and addresses of witnesses that the party intends to produce in its direct case together with a short statement of the testimony of each witness. Following entry of an order, a party shall not be permitted, except in the discretion of the hearing officer, to introduce into evidence, in the party's direct case, exhibits which are not filed in accordance with the order. At the conference, the hearing officer may designate a date before which he or she requires any party to specify what issues are conceded, and further proof of conceded issues shall not be required. The hearing officer shall also require the parties to simplify the issues, to consider admissions of fact and of documents which will avoid unnecessary proof and to limit the number of expert witnesses. The hearing officer shall enter an order reciting the concessions and agreements made by the parties, and shall enter an order on such other matters as are pertinent to the conduct of the hearing, and unless modified, the hearing shall be conducted by the order.

(2) The hearing officer may also order the parties to file, prior to the commencement of any hearing, the testimony of any or all of their respective witnesses, and to submit the testimony to the hearing officer and the opposing party or the opposing counsel by such date as the hearing officer shall determine. The witness shall testify under oath, and all of the testimony shall be in a question and answer format. Save for good cause shown, said testimony shall be the direct examination of the witness, provided, however, that the witness shall be available at the hearing for cross-examination by the opposing party or opposing counsel.

(3) The council, with the assistance of the chief hearing officer, shall promulgate, by regulation, such other prehearing procedures and/or hearing procedures as deemed necessary, include the use of portions of the superior court civil rules of discovery where such are not inconsistent with the applicable provisions of the Administrative Procedures Act.

46-23-20.4. Hearings - Orders. (1) Subject to the provisions of this chapter, every hearing for the adjudication of a violation or for a contested matter shall be held before a hearing officer or a subcommittee. The chief hearing officer shall assign a hearing officer to each matter not assigned to a subcommittee. After due consideration of the evidence and arguments, the hearing officer shall make written proposed findings of fact and proposed conclusions of law which shall be made public when submitted to the council for review. The council may, in its discretion, adopt, modify, or reject the findings of fact and/or conclusions of law provided, however, that any modification or rejection of the proposed findings of fact or conclusions of law shall be in writing and shall state the rationales therefor.

(2) The director of the department of the environment and the coastal resources management council shall promulgate such rules and regulations, not inconsistent with law, as to assure uniformity of proceedings as applicable.

46-23-20.5. Exparte consultations. Council members shall have no communication directly or indirectly, with a hearing officer relating to any issue of fact or of law on any matter then pending before the hearing officer.

46-23-20.6. Oaths - Subpoenas - Powers of hearing officers. The hearing officers are hereby severally authorized and empowered to administer oaths, and the hearing officers, in all cases of every nature pending before them, are hereby authorized and empowered to summon and examine witnesses and to compel the production and examination of papers, books, accounts, documents, records, certificates and other legal evidence that may be necessary or proper for the determination and decision of any question before or the discharge of any duty required by law of the hearing officer. All subpoenas and subpoena duces tecum shall be signed by a hearing officer or the commissioner of coastal resources, and shall be served as subpoenas are served in civil cases in the superior court; and witnesses so subpoenaed shall be entitled to the same fees for attendance and travel as are provided for witnesses in civil cases in the superior court. In cases of contumacy or refusal to obey the command of the subpoena so issued, the superior court shall have jurisdiction upon application of the council with proof by affidavit of the fact, to issue a rule or order returnable, in not less than two (2) nor more than five (5) days, directing the person to show cause why he or she should not be adjudged in contempt. Upon return of such order, the justice, before whom the matter is brought for hearing shall examine under oath the person, and the person shall be given an opportunity to be heard, and if the justice shall determine that the person has refused without reasonable cause or legal excuse to be examined or to answer a legal or pertinent questions, he or she may impose a fine upon the offender or forthwith commit the offender to the adult correctional institution, there to remain until he or she submits to do the act which he or she was so required to do, or is discharged according to law.

46-23-21. Notice of permit - Recordation. . A notice of permit shall be eligible for recordation under chapter 13 of title 34 as determined by the executive director, and shall be recorded at the expense of the applicant in the land evidence records of the city or town where the property subject to permit is located, and any subsequent transferee of the property shall be responsible for complying with the terms and conditions of the permit. The clerk of the various cities and towns shall record any orders, findings, or decisions of the council at no expense to the council.

46-23-22. Solid waste disposal licenses - Hearings. The chairperson of the coastal resources management council and the commissioner of the environmental protection branch of the department of environmental management shall coordinate concurrent hearings on solid waste disposal license applications, provided, however, that the chairperson and the commissioner of the environmental protection branch of the department of the environment may designate a hearing officer or subcommittee to hear all matters pertaining to the application and, provided further, that the hearing officer maybe from the department of the environment, the coastal resources management council hearing officer, a subcommittee, or an ad hoc hearing officer. The commissioner of coastal resources management with the approval of the chairperson may waive jurisdiction in those instances where the commissioner finds that there is no substantive coastal resources issue or that another agency or branch has adjudicated or addressed the issue.

46-23-23. Municipal comprehensive plan consideration. The coastal resources management council shall conform to the requirements of the Comprehensive Planning and Land Use Regulation Act, § 45-22-2.

46-23-24. Lien on property. The executive director may record the notice of fee or final order of fine as a lien on the subject property in the land evidence records of the town or city in which said property is located. Recordation of said fee or final order of fine shall be the only manner by which said lien may be perfected against the subject property.

Part One.

Authorities and Procedures

Section 100. Alterations and Activities That Require an Assent from the Coastal Resources Management Council

100.1. Tidal Waters, Shoreline Features, and Contiguous Areas

A. A Council Assent is required for any alteration or activity listed in Table 1, Table 1A, or Table 1B that are proposed for (1) tidal waters within the territorial seas (including coastal ponds, some of which are not tidal but which are coastal waters associated with a barrier beach system, and are physiographical features); (2) shoreline features; and (3) areas contiguous to shoreline features. Contiguous areas include all lands and waters directly adjoining shoreline features that extend inland two hundred (200) feet from the inland border of that shoreline feature.

Any alteration or activities as defined in this section must have an assent card posted and have a copy of the assent available at the site where the intended activity or alteration is to take place. Failure to post assent card and/or have a copy of the Assent available constitutes a violation under this program.

B. Council Assents are also required for any other activity or alteration not listed in Table 1, Table 1A, or Table 1B but which (1) has a reasonable probability of conflicting with the Council's goals and its management plans or programs, and/or (2) has the potential to damage the environment of the coastal region.

C. Tidal waters and coastal ponds have been assigned to one of six use categories. Findings, goals, and policies pertaining to each water use category are found in Part Two of this document. Large-scale maps showing the use categories are available in coastal town halls and at the Council's offices. The precise delineation of the seaward boundaries of the state's territorial sea must be clarified through special state legislation. Until that time, the Council shall use as a guide-line the boundaries shown in Figure 1. The land-ward boundary of the territorial sea is the mean high water mark along the Rhode Island coast.

D. Shoreline features together encompass the entire shore and are assigned to the following categories:

1) Coastal beaches and dunes;
2) Barrier beaches;
3) Coastal wetlands;
4) Coastal cliffs, bluffs, and banks;
5) Rocky shores; and,
6) Manmade shorelines.

The prerequisites, standards, and Category B requirements for on-land activities listed in Sections 300.1 through 300.15 and in Section 330 of this document apply to shoreline features, their 200-foot contiguous area, and inland activities subject to Sections 320 and 325.

Section 100.2
Inland of Shoreline Features and Contiguous Areas

A. The Council reserves the right to review the following categories of alterations and activities proposed inland of shoreline features and their contiguous areas:

1) Power-generating plants (excluding facilities of less than a 40-megawatt capacity);
2) Petroleum storage facilities (excluding those of less than a 2,400-barrel capacity);
3) Chemical or petroleum processing;
4) Minerals extraction;
5) Sewage treatment and disposal facilities (excluding individual sewage disposal systems);
6) Solid waste disposal facilities; and,
7) Desalination plants.

Where, on the basis of a review, it is found that a proposal has a reasonable probability of conflict with adopted resources management plans or programs, and/or has the potential to damage the coastal environment, the Council shall require that an Assent be obtained. Inland activities and alterations that may be subject to Council permitting are defined, and Council findings, goals, policies, and regulations are set forth, in Section 320.

Section 100.3
Critical Coastal Areas

A. Watersheds of Poorly Flushed Estuaries

1. The Council reserves the right to review any activity proposed within the watersheds of poorly flushed estuaries and critical coastal areas. Therefore the Council has developed and adopted Special Area Management Plans in order to address the specific environmental concerns of those priority management areas. In addition to those activities captured under the Council's management program, activities within Special Area Management Plans (as delineated by the poorly flushed estuary boundary on the attached RICRMP maps, and on the maps accompanying each SAM plan) that have a reasonable probability of conflicting with the goals of this plan must submit an application for an assent. These activities are:

a) Subdivisions, cooperatives, and other multi-ownership facilities [of six (6) units or more];
b) Any structure serviced by an on-site sewage disposal system servicing 2,000 gallons or more per day;
c) Any activity which results in the creation of 40,000 sq. ft. or more of impervious surface;
d) Construction or extension of municipal or industrial sewage facilities or systems (not connections to individual homes); and,
e) Water distribution systems or extensions of supply lines (not connections to individual homes).

Applicants proposing one or more of these activities shall apply to the Council. For more detailed mapping of the poorly flushed estuaries and their adjacent land use areas, as well as policies and recommendations pertaining to these areas, please see the appropriate Special Area Management Plan.

Table 1. Review Categories and Prohibited Activities in Tidal Waters and on Adjacent Shoreline Features (Water Type Matrices)

Review categories for activities within the 200-foot area contiguous to shoreline features are listed in Table 1A. All Category B activities and starred (*) Category A activities are put out to public notice. Maintenance of existing structures is treated in Section 300.14. Letter codes are as follows:

A - Category A Assent required;
B - Category B Assent required;
P - Prohibited;
NA - Not applicable.

Footnotes appearing in Table 1 (Matrices)

[1]See definitions in Section 300.2(A) for differentiation between Category A and B reviews.

[2]Municipal sewer lines are reviewed as Category B.

[3]Utility lines are reviewed as Category B.

[4]See Section 210.3(C)6; the review categories shown here for Type 3, 4, 5, and 6 waters apply to wetlands designated for preservation.

[5]For residential docks, piers, floats see Section 300.4.C.4 for review procedures.

[6]See Section 200.2.C.2 for pre-existing marinas in Type 2 Waters.

[7]Category A review for pre-existing marinas in Type 2 waters (See Section 300.9.A.1); Category B review for residential boating facilities in Type 2 waters (See Section 300.9.E.7).

[8]Structural shoreline protection facilities may only be permitted to protect historic structures which are currently listed in the National Register of Historic Places. Additionally, the proposal must meet all applicable standards contained within in Section 300.7.

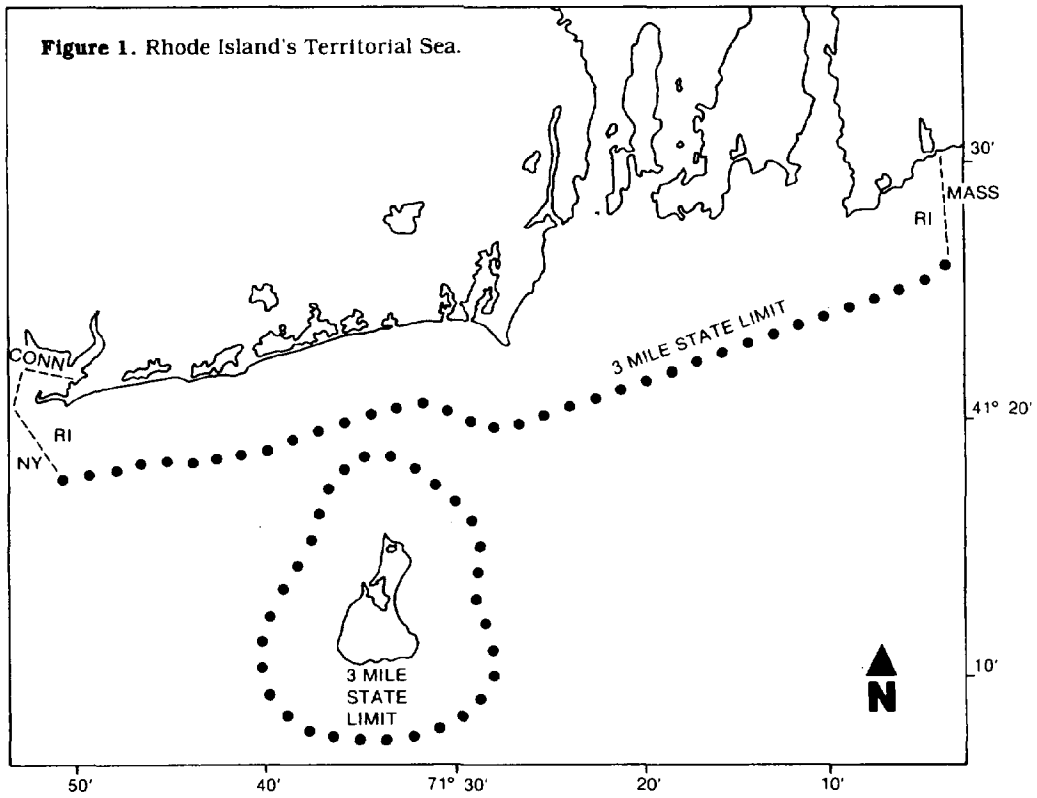


Figure 1. Rhode Island's Territorial Sea.

The offshore limits of the state's territorial sea are being litigated before the U.S. Supreme Court. This sketch shows the maximum area that the state may claim under existing laws and treaties.

Type 1 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barriers	Moderately Developed Barriers	Developed Barriers	Coastal Wetlands	Headlands, Bluffs, and Cliffs	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	P	P	A[1]	A[1]	P	P	P	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	P	B
Commercial/Industrial Structures	P	P	P	P	B	P	P	P	P	P
Recreational Structures	P	P	P	P	B	P	P	P	B	B
Recreational Mooring Areas	P	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	P	P	P	P	P	P	P	P	P	P
Launching Ramps*	P	P	P	P	P	P	P	P	P	P
Residential Docks,*Piers,*& Floats	P	P	P	P	P	P	P	P	P	P
Mooring of Houseboats	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	P	P	P[2]	B	P	P	P	P	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	P	B
Point Discharges - Runoff	B	A	A	A	A	A	A	A	A	A
Point Discharges - Other	P	P	P	P	B	P	P	P	P	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection	P	P	P	P	P	P	P	P	B	B[8]
Energy-related Activities/ Structures	P	P	P	P[3]	B	P	P	P	B	B
Dredging - Improvement	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging - Maintenance	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	P	B	B	B	P	P	P	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	P	P	P	P	B	P	P	P	B	B

Type 2 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barriers	Moderately Developed Barriers	Developed Barriers	Coastal Wetlands	Headlands, Bluffs, and Cliffs	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	P	P	A[1]	A[1]	P	P	P	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	A	B
Commercial/Industrial Structures	P	P	P	P	B	P	P	P	B	P
Recreational Structures	P	P	P	P	B	P	P	P	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	P[6]	P	P	P	P	P	P	P	P	P
Launching Ramps*	B	B	B	P	B	B	P	B	B	B
Residential Docks,*Piers,*& Floats	A/B[5]	B	P	P	B	B	B	B	B	B
Mooring of Houseboats	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	P	P	P[2]	B	P	P	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	P	B
Point Discharges - Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges - Other	B	P	P	P	B	P	P	P	P	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection	B[6]	B	P	P	P	P	B	B	B	B
Energy-related Activities/ Structures	B	P	P	P[3]	B	P	P	P	B	B
Dredging - Improvement	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging - Maintenance	A/B[7]	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	P	B	B	B	P	P	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	P[6]	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	P	P	P	B	P	P	P	B	B

Type 3 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barriers	Moderately Developed Barriers	Developed Barriers	Coastal Wetlands	Headlands, Bluffs, and Cliffs	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	P	B	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Recreational Structures	B	B	P	P	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	P	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,*Piers,*& Floats	A/B[5]	A	P	P	A	A	A	A	A	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	P	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	P	P	P[2]	B	P	P	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	B	B
Point Discharges - Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges - Other	B	B	P	B	B	P	P	P	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection	B	B	P	P	P	P	B	B	B	B
Energy-related Activities/ Structures	B	P	P	P[3]	B	P	B	B	B	B
Dredging - Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging - Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	P	P	P	B	P	B	B	B	B

Type 4 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barriers	Moderately Developed Barriers	Developed Barriers	Coastal Wetlands	Headlands, Bluffs, and Cliffs	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	B	B	A[1]	B
Residential Structures	P	P	P	P	A	P	P	P	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Recreational Structures	B	B	P	P	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	P	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,*Piers,*& Floats	A/B[5]	A	P	P	A	A	A	A	A	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	B	B	P	P[2]	B	P	B	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	P	P	A	B
Point Discharges - Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges - Other	B	B	P	B	B	P	B	B	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection	B	B	P	P	P	P	B	B	B	B
Energy-related Activities/ Structures	B	B	P	P[3]	B	P	B	B	B	B
Dredging - Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging - Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	B	P	P	B	P	B	B	B	B

Type 5 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barriers	Moderately Developed Barriers	Developed Barriers	Coastal Wetlands	Headlands, Bluffs, and Cliffs	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	B	B	A[1]	B
Residential Structures	P	P	P	P	A	P	B	B	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Recreational Structures	B	B	P	P	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	P	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,*Piers,*& Floats	A/B[5]	A	P	P	A	A	A	A	A	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	P	B	P	P[2]	B	P	B	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	B	B	A	B
Point Discharges - Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges - Other	B	B	P	B	B	P	B	B	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection	B	B	P	P	P	P	B	B	B	B
Energy-related Activities/ Structures	B	B	P	P[3]	B	P	B	B	B	B
Dredging - Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging - Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	B	P	P	B	P	B	B	B	B

Type 6 Waters

	Tidal Waters	Beaches and Dunes	Undeveloped Barriers	Moderately Developed Barriers	Developed Barriers	Coastal Wetlands	Headlands, Bluffs, and Cliffs	Rocky Shores	Manmade Shorelines	Areas of Historic/ Archaeological Significance
Filling, Removal, and Grading of Shoreline Features	NA	B	P	A[1]	A[1]	P	B	B	A[1]	B
Residential Structures	P	P	P	P	A	P	B	B	A	B
Commercial/Industrial Structures	B	B	P	P	B	P	B	B	B	B
Recreational Structures	B	B	P	P	B	P	B	B	B	B
Recreational Mooring Areas	B	NA	NA	NA	NA	NA	NA	NA	NA	NA
Marinas	B	B	P	P	B	P	B	B	B	B
Launching Ramps*	B	B	P	B	B	P	B	B	B	B
Residential Docks,*Piers,*& Floats	A/B[5]	B	P	P	B	B	B	B	B	B
Mooring of Houseboats	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mooring of Floating Businesses	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Municipal Sewage Treatment Facilities	B	B	P	P[2]	B	P	B	B	B	B
Individual Sewage Disposal Systems	P	P	P	P	A	P	B	B	A	B
Point Discharges - Runoff	A	A	A	A	A	A	A	A	A	A
Point Discharges - Other	B	B	P	B	B	P	B	B	B	B
Non-Structural Shoreline Protection	A	A	A	A	A	A	A	A	A	A
Structural Shoreline Protection	B	B	P	P	P	P	B	B	B	B
Energy-related Activities/ Structures	B	B	P	P[3]	B	P	B	B	B	B
Dredging - Improvement	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Dredging - Maintenance	A	NA	NA	NA	NA	P	NA	NA	NA	NA
Open-Water Dredged Material Disposal	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Upland Dredged Material Disposal	NA	B	B	B	B	P	B	B	B	B
Beach Nourishment	B	B	B	B	B	P	NA	NA	NA	B
Filling in Tidal Waters	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Aquaculture	B	NA	NA	NA	NA	P	NA	NA	NA	NA
Mosquito Control Ditching	A	NA	NA	NA	NA	A	NA	NA	NA	B
Mining	P	P	P	P	P	P	P	P	P	P
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, Airports	B	B	P	P	B	P	B	B	B	B

Table 1A. Review Categories in the 200-foot Area Contiguous to Shoreline Features.

Alteration or Activity	Review Category
Filling, Removal, and Grading of Shoreline Features	A/B[1]
Residential buildings	A[2]
Commercial and Industrial Structures	A/B[3]
Recreational Structures	A/B[3]
Municipal Sewage Treatment Facilities	A/B[3]
Individual Sewage Disposal Systems	A
Point Discharges - Runoff	A
Point Discharges - Other	B
Structural Shoreline Protection	B
Non-Structural Shoreline Protection	A
Upland Dredged Material Disposal	B
Energy-related Structures	B
Mining	B
Construction of Public Roads, Bridges, Parking Lots, Railroad Lines, and Airports	B
Associated Residential Structures	A/F (F-Finding of No Significant Impact)

NOTE: Setbacks from buffers and/or critical erosion areas as required in this program or any Special Area Management Plan are to be applied to these activities

Footnotes:

1. Section 300.2(A)2 for differentiation between Category A and B reviews.

2. See Section 320.D.2.

3. For commercial and industrial structures, recreational structures, and municipal sewage treatment facilities, a Category "A" review may be permitted provided that the Executive Director determines that:

(1) All criteria in Section 110.1A are met;

(2) The proposed activity is determined to be a minor alteration with respect to potential impacts to the waterway, coastal feature, and in areas within RICRMP jurisdiction;

(3) The proposed activity conforms with any and all applicable adopted CRMC special area management plans;

(4) The proposed activity will not significantly conflict with existing uses and activities in the waterway, on the coastal feature, and in areas within RICRMP jurisdiction;

(5) The proposed activity does not represent new development of a site within RICRMP jurisdiction along a Type 1, 2, or 4 waterway.

Table 1B. Review Categories for Inland Activities (Section 320 and Section 325)

Alteration or Activity	Review Category
Statewide	
Power-generating plants (excluding facilities of less than a 40-megawatt capacity)	B
Petroleum storage facilities (excluding those of less than 2,400-barrel capacity)	B
Chemical or petroleum processing facilities	B
Minerals extraction	B
Sewage treatment and disposal facilities (excluding individual sewage disposal systems)	B
Solid waste disposal facilities	B
Desalination plants	B
Extending Onto Coastal Feature or Contiguous Area	
Subdivision, co-operative, or other multi-ownership facility	A/B[1]
40,000 square feet of impervious surface	A/B[2]
Critical Coastal Areas	
Subdivision, co-operative, or other multi-ownership facility	A/B[1]
20,000 square feet of impervious surface	A/B[2]
On-site sewage disposal system serving more than 2,000 gallons per day	A/B[2]
Extension of municipal or industrial treatment facilities or sewer lines	B
Water distribution systems or the extension of supply lines	A/B[2]

Footnotes

[1]*For residential subdivisions a Category "A" review may be permitted provided that the proposed subdivision is less than six (6) units.*

[2]*Determined based on the application of other requirements (e.g., Table 1 or 1A) or at the discretion of the Executive Director.*

Section 110. Applications for Category A and Category B Council Assents

110.1 Category A Applications

A. The activities and alterations listed as "A" in Table 1 (shoreline features and tidal waters), Table 1A (the 200-foot area contiguous to shoreline features) or Table 1B (inland activities) include routine matters and categories of construction and maintenance work that do not require review by the full Council if criteria (1) through (4) below are all met.

1) The goals, policies, prerequisites, and standards of this document that apply to the areas and activities in question are met.

2) All buffer zone and setback requirements as contained in Sections 140 and 150 are met.

3) Substantive objections are not raised by abutters of those Category A applications sent out to public notice, the CRMC members have not raised objections, or the Executive Director has not made a determination that the Category A activity in question is more appropriately reviewed as a Category B activity. (Note that starred Category A activities listed in Table 1 are put out to notice). It should be noted that all notice procedures are subject to the provisions of the Administrative Procedures Act (APA).

4) Proof of certification of compliance with all applicable state and local statutes, ordinances, and regulations is provided.

B. If the Council's executive director verifies that these criteria have been met, an Assent for the proposed activity or alteration will be issued. This Assent may include stipulations or conditions to ensure compliance with the goals, policies, and standards of this Program.

C. If the criteria listed in Section 110.1(A) are not verified as met or a substantive objection is filed, the application shall be considered a Category B application and will be reviewed by the full Council.

D. Applicants desiring relief from one or more standards may apply for a variance (Section 120).

Section 110.2.
Category B Applications

A. Applicants for activities and alterations listed as "B" in Table 1 Table 1A, or Table 1B in addition to adhering to the applicable policies, prerequisites, and standards, are required to address all Category B requirements as listed in applicable sections of the program and, where appropriate, other issues identified by the Council.

B. Formal notice will be provided to all interested parties once completed forms for a Category B application have been filed with the Council. A public hearing will be scheduled if there are one or more substantive objections to the project, or at the consensus of four or more members of the Council.

C. A Category B Assent shall be issued if the Council finds that the proposed alteration conforms with the goals, policies, prerequisites, informational requirements, and standards of this Program.

Section 110.3. Substantive Objections

A. Substantive objections are defined by one or more of the following:

1) threat of direct loss of property, property values, or other tangible assets of the objector(s) at the site in question;

2) direct evidence that the proposed alteration or activity does not meet all of the policies, prerequisites, and standards contained in applicable sections of this document;

3) evidence is presented which demonstrates that the proposed activity or alteration has a potential for significant adverse impacts on one or more of the following descriptors of the coastal environment: (a) circulation and/or flushing patterns; (b) sediment deposition and erosion; (c) biological communities, including vegetation, shellfish and finfish resources, and wildlife habitat; (d) areas of historic and archaeological significance; (e) scenic and/or recreation values; (f) water quality; (g) public access to and along the shore; (h) shoreline erosion and flood hazards; or

4) evidence that the proposed activity or alteration does not conform to state or duly adopted municipal development plans, ordinances, or regulations.

Section 110.4
Findings of No Significant Impact

A. Certain construction and alteration activities within 200 feet of a coastal feature frequently are found to pose little impact or threat to coastal resources and therefore do not warrant full CRMC staff review. These activities are often associated with existing residential, commercial, and/or industrial sites or previously assented structures or activities and include, but are not limited to, interior renovations, construction of attached decks, dormers, porches, second story additions, roofing, siding or window and door alterations, installation of detached tool sheds, flag poles, fences along property bounds located landward of the coastal feature and certain types of landscaping work.

B. These associated structures and activities, depending on the extent of alteration and proximity to the coastal feature, may, on a case by case basis, and after preliminary review of the proposed activity or upon staff recommendation, be determined by the Council's Executive Director as having an insignificant threat to coastal resources. In such cases, an application for a finding of no significant impact to undertake the proposed activity will be required. The property owner will receive a letter from the Executive Director informing him of the determination, the limits of authorized work, and a time frame within which the work is to be completed. This letter must be kept on-site and available for inspection by appropriate CRMC officials.

Section 120. Variances

A. Applicants desiring a variance from a standard shall make such request in writing and address the five criteria listed below. The application shall then be granted an Assent only if the Council finds that the following five criteria are met:

1) The proposed alteration conforms with applicable goals and policies in Parts Two and Three.

2) The proposed alteration will not result in significant adverse environmental impacts or use conflicts.

3) Due to conditions at the site in question, the standard will cause the applicant an undue hardship.

4) The modification requested by the applicant is the minimum necessary to relieve an undue hardship.

5) The undue hardship is not the result of any prior action of the applicant.

B. Relief from a standard does not remove the applicant's responsibility to comply with all other Program requirements.

C. Prior to requesting approval for a CRMC variance, in those instances where a variance would be obviated if a variance for a setback were acquired from the local municipality, the applicant must first exhaust his remedies before the local municipality.

Section 130. Special Exceptions

A. Special exceptions may be granted to prohibited activities to permit alterations and activities that do not conform with a Council goal for the areas affected or which would otherwise be prohibited by the requirements of this document only if and when the applicant has demonstrated that:

1) The proposed activity serves a compelling public purpose which provides benefits to the public as a whole as opposed to individual or private interests. The activity must be one or more of the following: (a) an activity associated with public infrastructure such as utility, energy, communications, transportation facilities; (b) a water-dependent activity that generates substantial economic gain to the state; and/or (c) an activity that provides access to the shore for broad segments of the public.

2) All reasonable steps shall be taken to minimize environmental impacts and/or use conflict.

3) There is no reasonable alternative means of, or location for, serving the compelling public purpose cited.

B. Special exceptions may be granted only after proper notice in accordance with the Rhode Island Administrative Procedures Act, a public hearing has been held, and the record of that hearing has been considered by the full Council. The Council shall make public the findings and conclusions upon which a decision to issue a Special Exception are based.

C. In granting a Special Exception, the Council shall apply conditions as necessary to promote the objectives of the Program. Such conditions may include, but are not limited to, provisions for:

1) Minimizing adverse impacts of the alteration upon other areas and activities by stipulating the type, intensity, and performance of activities, and the hours of use and operation;

2) Controlling the sequence of development, including when it must be commenced and completed;

3) Controlling the duration of use or development and the time within which any temporary structure must be removed;

4) Assuring satisfactory installation and maintenance of required public improvements;

5) Designating the exact location and nature of development; and

6) Establishing detailed records by submission of drawings, maps, plots, or specifications.

Section 140. Setbacks

A. Definition: a setback is the minimum distance from the inland boundary of a coastal feature at which an approved activity or alteration may take place.

B. Setbacks shall be maintained in areas contiguous to coastal beaches, coastal wetlands, coastal cliffs and banks, rocky shores, and existing manmade shorelines, and apply to the following categories of activities and alterations:

1) Filling, removal, or grading, except when part of an approved alteration involving a water-dependent activity or structure (Section 300.2);

2) Residential buildings and garages excluding associated structures (Section 110.4);

3) New individual sewage disposal systems, sewage treatment plants, and associated sewer facilities excluding outfalls (Section 300.6). Repairs and replacements of existing (permitted) individual sewage disposal systems shall be exempt from the Council's setback requirements;

4) Industrial structures, commercial structures, and public recreation structures that are not water-dependent (Section 300.3); and

5) Transportation facilities that are not water-dependent (Section 300.13).

C. Setbacks shall extend a minimum of either fifty (50) feet from the inland boundary of the coastal feature or twenty-five (25) feet inland of the edge of a Coastal Buffer Zone, whichever is further landward. In areas designated by the Council as Critical Erosion Areas (Table 2), the minimum distance of the setback shall be not less than 30 times the calculated average annual erosion rate for less than four dwelling units and not less than 60 times the calculated average annual erosion rate for commercial, industrial or dwellings of more than 4 units. Due to site conditions over time, field verification of a coastal feature or coastal buffer zone may result in a setback determination different than that calculated using a shoreline change rate.

D. Applicants for alterations and activities who cannot meet the minimum setback standards may apply to the Council for a variance (Section 120).

E. The setback provisions do not apply to minor modifications or restoration of structures that conform with all other policies and standards of this program.

Table 2. Setbacks in Critical Erosion Areas.

Erosion Category (on accompanying maps	Annual Estimated Rate (in feet)	Setback Distance* (in feet)	Setback Distance** (in feet)
(A)	2-2 ½	75	150
(B)	3-4	120	240
(C)	4-5	150	300
(D)	5-6	180	360

* 4 units or less
** more than 4 units

NOTE: Setbacks in Critical Erosion areas as found on the accompanying Shoreline Change Maps for Watch Hill to Point Judith will be determined using the rates of change found on each map.

Section 150. Coastal Buffer Zones

A. Definition

1. A Coastal Buffer Zone is a land area adjacent to a Shoreline (Coastal) Feature that is, or will be, vegetated with native shoreline species and which acts as a natural transition zone between the coast and adjacent upland development. A Coastal Buffer Zone differs from a construction setback (Section 140) in that the setback establishes a minimum distance between a shoreline feature and construction activities, while a buffer zone establishes a natural area adjacent to a shoreline feature that must be retained in, or restored to, a natural vegetative condition (Figure 2). The Coastal Buffer Zone is generally contained within the established construction setback.

B. Findings

1. The establishment of Coastal Buffer Zones is based upon the CRMC's legislative mandate to preserve, protect and, where possible, restore ecological systems.

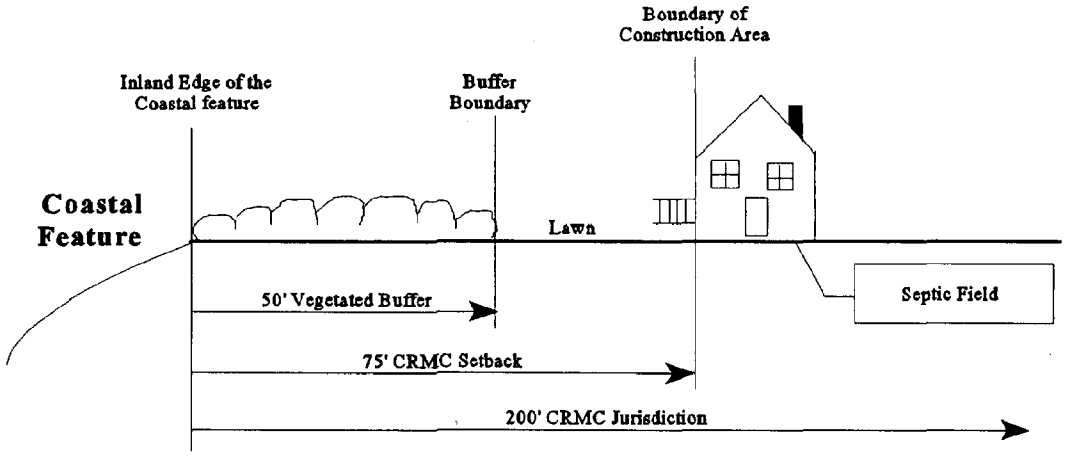
2. Vegetated buffer zones have been applied as best management practices within the fields of forestry and agriculture since the 1950s to protect in-stream habitats from degradation by the input of sediment and nutrients (Desbonnet et al 1993).

More recently, vegetated buffer zones have gained popularity as a best management practice for the control and abatement of nonpoint source pollutants (contaminated runoff) and are routinely applied in both engineered and natural settings (Desbonnet et al 1993; EPA 1993).

3. Coastal Buffer Zones provide multiple uses and multiple benefits to those areas where they are applied (Desbonnet et al 1993). The multiple uses and benefits of Coastal Buffer Zones include:

(a) *Protection of Water Quality*: Buffer zones along the perimeter of coastal water bodies can be effective in trapping sediments, pollutants (including oil, detergents, pesticides, herbicides, insecticides, wood preservatives and other domestic chemicals), and absorbing nutrients (particularly nitrogen) from surface water runoff and groundwater flow. The effectiveness of vegetated buffers as a best management practice for the control of nonpoint source runoff is dependent upon their ability to reduce the velocity of runoff flow to allow for the deposition of sediments, and the filtration and biological removal of nutrients within the vegetated area. In general, the effectiveness of any vegetated buffer is related to its width, slope, soil type, and resident species of vegetation. Effective buffers for nonpoint source pollution control, which remove at least 50%, and up to 99%, of sediments and nutrients entering them, range from 15 feet to 600 feet in width.

Figure 2. An Example of the Application of a Coastal Buffer Zone



The removal of pollutants can be of particular importance in areas abutting poorly flushed estuaries that are threatened by an excess of nutrients or are contaminated by runoff water, such as the South Shore Salt Ponds and the Narrow River. Large, well flushed water bodies, such as Narragansett Bay, are also susceptible to nonpoint source pollutant inputs, and can be severely impacted by nonpoint source pollutants as has been documented in studies completed for the Narragansett Bay Project.

(b) *Protection of Coastal Habitat*: Coastal Buffer Zones provide habitat for native plants and animals. Vegetation within a buffer zone provides cover from predation and climate, and habitat for nesting and feeding by resident and migratory species. Some species which use coastal buffer zones are now relatively uncommon, while others are considered rare, threatened or endangered. These plants and animals are essential to the preservation of Rhode Island's valuable coastal ecosystem.

The effectiveness of vegetated buffers as wildlife habitat is dependent upon buffer width and vegetation type. In general, the wider the buffer the greater its value as wildlife habitat. Larger buffer widths are typically needed for species that are more sensitive to disturbances (e.g., noise). Furthermore, those buffers that possess vegetation native to the area provide more valuable habitat for sustaining resident species. A diversity of plant species and types (e.g., grasses, shrubs and trees) promotes biodiversity within the buffer area, and the region overall.

(c) *Protection of Scenic and Aesthetic Quality*: One of the primary goals of the Council is to preserve, protect, and where possible restore the scenic value of the coastal region in order to retain the visual diversity and unique visual character of the Rhode Island coast as seen by hundreds of thousands of residents and tourists each year from boats, bridges, and such vantage points as roadways, public parks, and public beaches (Section 330). Coastal Buffer Zones enhance and protect Rhode Island's scenic and visual aesthetic resources along the coast. Coastal buffers also preserve the natural character of the shoreline, while mitigating the visual impacts of coastal development. Visual diversity provides for both contrast and relief between the coastal and inland regions, leading to greater aesthetic value of the landscape.

(d) *Erosion Control*: Coastal Buffer Zones provide a natural transition zone between the open coast, shoreline features and upland development. Natural vegetation within a Coastal Buffer Zone helps to stabilize the soil, reduces the velocity of surface water runoff, reduces erosion of the soil by spreading runoff water over a wide area, and promotes absorption and infiltration through the detrital (leaf) layer and underlying soils. The extensive root zones often associated with buffer zone vegetation also help prevent excessive shoreline erosion during coastal storm events by stabilizing underlying soils.

(e) *Flood Control*: Coastal Buffer Zones aid in flood control by reducing the velocity of runoff and by encouraging infiltration of precipitation and runoff into the ground rather than allowing runoff to flow overland and flood low lying areas. In addition, Coastal Buffer Zones often occupy the flood plain itself and thus add to coastal flood protection.

(f) *Protection of Historic and Archaeological Resources*: Coastal Buffer Zones protect areas of cultural and historic importance such as archaeological sites by helping prevent intrusion while protecting the sites' natural surroundings.

C. Policies

1. The establishment of a Coastal Buffer Zone is based upon the CRMC's legislative mandate to preserve, protect and, where possible, restore ecological systems. The determination of the inland boundary of the Coastal Buffer Zone must balance this mandate with the property owner's rights to develop and use the property.

2. The Council shall require Coastal Buffer Zones in accordance with the requirements of this section for the following: a) new residential development; b) commercial and industrial development; c) activities subject to Section 300.8 and Section 300.13; and d) inland activities identified in Section 320. For existing residential structures, the Council shall require a Coastal Buffer Zone for category "A" and "B" activities when (a) the RIDEM requires the modification or expansion of an existing septic system or, (b) when the footprint of the structure as of August 8, 1995 is expanded 50 percent or more.

3. The vegetation within a buffer zone must be either retained in a natural, undisturbed condition,

or properly managed in accordance with the standards contained in this section. In cases where native flora (vegetation) does not exist within a buffer zone, the Council may require restoration efforts which include, but are not limited to, replanting the Coastal Buffer Zone with native plant species.

4. Coastal Buffer Zones shall remain covered with native flora and in an undisturbed state in order to promote the Council's goal of preserving, protecting, and restoring ecological systems. However, the Council may permit minor alterations to Coastal Buffer Zones that facilitate the continued enjoyment of Rhode Island's coastal resources. All alterations to Coastal Buffer Zones or alterations to the natural vegetation (i.e., areas not presently maintained in a landscaped condition) within the Council's jurisdiction shall be conducted in accordance with the standards contained in this section as well as all other applicable policies and standards of the Council. In order to ensure compliance with these requirements, the Council may require applicants to submit a Buffer Zone Management Plan.

5. In order to enhance conservation, protect water quality, and maintain the low intensity use characteristic of Type 1 and 2 waters, greater buffer widths shall be applied along the coastline abutting these water types.

6. In critical areas and when the property owner owns adjoining lots, these lots shall be considered as one lot for the purposes of applying the values contained in Table 2a and ensuring that the appropriate buffer zone is established.

Table 2a. Coastal Buffer Zone Designations For Residential Development

Residential Lot Size (sq. ft.)	Water Use Category: Type 3, 4, 5 & 6		Water Use Category: Type 1 & 2
	Required Buffer (ft)		
< 10,000	15	.....	25
10,000 - 20,000	25	.....	50
20,001 - 40,000	50	.....	75
40,001 - 60,000	75	.....	100
60,001 - 80,000	100	.....	125
80,001 - 200,000	125	.....	150
> 200,000	150	.....	200

D. Standards

1. All Coastal Buffer Zones shall be measured from the inland edge of the most inland Shoreline (Coastal) Feature.

2. *Coastal Buffer Zone Requirements for New Residential Development*: The minimum Coastal Buffer Zone requirements for new residential development bordering Rhode Island's shoreline are contained in Table 2a. The Coastal Buffer Zone requirements are based upon the size of the lot and the CRMC's designated Water Types (Type 1 - Type 6). Where the buffer zone requirements noted above cannot be met, the applicant may request a variance in accordance with Section 120. A variance to 50% of the required buffer width may be granted administratively by the Executive Director if the applicant has satisfied the burdens of proof for the granting of a variance. Where it is determined that the applicant has not satisfied the burdens of proof, or the requested variance is in excess of 50% of the required width, the application shall be reviewed by the full Council.

3. *Coastal Buffer Zone Requirements for Existing Residential Structures that Expand the Footprint of the Structure 50 percent or more.* Where alterations to an existing residential structure result in the expansion of the structure's footprint (square footage of the ground floor area encompassed by the structural foundation of an existing building) 50 percent or more, the Coastal Buffer Zone requirement shall be established with a width equal to the percentage increase in a structure's footprint as of August 8, 1995, multiplied by the value contained in Table 2a ([square foot increase of footprint/square footage as of August 8, 1995] X value contained in Table 2a=Coastal Zone Buffer Requirement).

This requirement only applies to category "A" and "B" assents. In addition, the Executive Director shall have the authority to grant a variance to this requirement for category "A" assents in accordance with the burdens of proof contained in Section 120.

4. *Coastal Buffer Zone Requirements for Structures Required by the RIDEM to Modify or Expand an Existing Septic System:* Where alterations to a residential structure result in an increase in flow to the Individual Sewage Disposal System (ISDS) and the RIDEM has required the modification or expansion of the existing ISDS, the Coastal Buffer Zone requirement shall be established with a width equal to 25% of the value contained in Table 2a (0.25 X value contained in Table 2a = Coastal Buffer Zone requirement).

This requirement only applies to category "A" and "B" assents. In addition, the Executive Director shall have the authority to grant a variance to this requirement for category "A" assents in accordance with the burdens of proof contained in Section 120.

5. *Coastal Buffer Zone Requirements for all Commercial and Industrial development and activities subject to the requirements of Section 300.8, Section 300.13, or Section 320*: Coastal Buffer Zones shall be determined on a case-by-case basis by the Council. Table 2a may be used as appropriate guidance. However, depending on the activity proposed and its potential impacts on coastal resources, the Council may require a Coastal Buffer Zone with a width greater than that found in the Table 2a.

6. All property abutting critical habitat areas, as defined by the Rhode Island National Heritage Program or the Council, shall possess a minimum vegetated buffer zone of 200 feet between the identified habitat and any development area. The Executive Director shall have the authority to grant a variance to these requirements in accordance with the burdens of proof contained in Section 120.

7. All property abutting Coastal Natural Areas (Section 210.4) shall have a minimum vegetated Coastal Buffer Zone of 25 feet from the inland edge of the coastal feature. The Executive Director shall have the authority to grant a variance to these requirements in accordance with the burdens of proof contained in Section 120.

8. All property located within the boundaries of a Special Area Management (SAM) Plan approved by the Council shall meet additional buffer zone requirements contained within these SAM plans. When a SAM plan's buffer zone requirements apply, the buffer width values contained in this section will be compared to those required by the SAM plan, and the larger of the buffer widths applied.

9. The setback (Section 140) for all new residential, commercial, and industrial structures shall exceed the Coastal Buffer Zone requirement by a minimum of 25 feet for fire, safety, and maintenance purposes. Where the 25 foot separation distance between the inland edge of the

buffer and construction setback cannot be obtained, the applicant may request a variance in accordance with Section 120. The Executive Director shall have the authority to grant variances to this requirement. However, a vegetated Coastal Buffer Zone shall not directly contact any dwelling's footprint.

E. Buffer Management and Maintenance Requirements

1. All alterations within established Coastal Buffer Zones or alterations to natural vegetation (i.e., areas not presently maintained in a landscaped condition) within the Council's jurisdiction may be required to submit a Buffer Zone Management Plan for the Council's approval that is consistent with the requirements of this section and the Council's most recent edition of *Buffer Zone Management Guidance*. Buffer Zone Management Plans shall include a description of all proposed alterations and methods of avoiding problem areas such as the proper placement and maintenance of pathways. Applicants should consult the Council's most recent edition of *Buffer Zone Management Guidance* when preparing a buffer management plan.

2. In order to promote the Council's goal to preserve, protect and, where possible, restore ecological systems, Coastal Buffer Zones shall be vegetated with native flora and retained in a natural, undisturbed condition, or shall be properly managed in accordance with Council's most recent edition of *Buffer Zone Management Guidance*. Such management activities compatible with this goal include, but are not limited to:

(a) *Shoreline Access Paths*: Pathways which provide access to the shoreline are normally considered permissible provided they are less than or equal to 6 feet wide and follow a path that minimizes erosion and gullying within the buffer zone (e.g., a winding, but direct path). Pathways should avoid, or may be prohibited in, sensitive habitat areas, including, but not limited to, coastal wetlands. Pathways may be vegetated with grasses and mowed or may be surfaced with crushed stone or mulch.

(b) *View Corridors*: Selective tree removal and pruning and thinning of natural vegetation may be allowed within a defined corridor in order to promote a view of the shoreline. Only the minimal alteration of vegetation necessary to obtain a view shall be acceptable to the Council. Shoreline access paths shall be located within view corridors to the maximum extent practicable in order to minimize disturbance of Coastal Buffer Zones. View corridors shall be prohibited in sensitive or critical habitat areas.

(c) *Habitat Management*: Management of natural vegetation within a buffer zone to enhance wildlife habitat and control nuisance and non-native species of vegetation may be allowed. Homeowner control of pest species of vegetation such as European bittersweet and nuisance species such as poison ivy is normally considered acceptable. However, the indiscriminate use of herbicides or the clear-cutting of vegetation shall be prohibited. The use of fertilizers is generally prohibited within the Coastal Buffer Zone except when used to enhance the replanting of native vegetation (e.g., hydro-seeding) approved by the Council. However, the clearing or outright elimination of natural vegetation for such purposes as controlling ticks or pollen shall not be permitted.

(d) *Safety and Welfare*: Selective tree removal, pruning and thinning of natural vegetation within a Coastal Buffer Zone may be allowed by the Council on a case-by-case basis for proven safety and welfare concerns (e.g., removal of a damaged tree in close proximity to a dwelling). In order to promote child safety and manage pets in areas harboring ticks, fences along the inland edge of a Coastal Buffer Zone and along shoreline access pathways may be permitted.

(e) *Shoreline Recreation*: The CRMC recognizes that shoreline recreation is one of the predominant attractions for living on, or visiting the Rhode Island Coast. In order to allow for such uses, minor alterations of buffer zones may be permitted along the shoreline if they are determined to be consistent with Council's requirements. These alterations may include maintaining a small clearing along the shore for picnic tables, benches, and recreational craft (dinghies, canoes, day sailboats, etc.). Additionally, the CRMC may allow small, non-habitable structures including storage sheds, boat houses and gazebos within Coastal Buffer Zones, where appropriate. However, these structures may be prohibited in sensitive or critical habitat areas. Due to the potential for these structures to impact values provided by Coastal Buffer Zones, the Council shall exercise significant discretion in this area.

Section 160. Fees

A. The General Laws of the State of Rhode Island. Title 46, Chapter 23, Section 2, Subsection 46-23-6D.C, authorize the Council to "grant licenses, permits, and easements for the use of Coastal Resources, which are held in trust by the state for all its citizens, and impose fees for private use of such resources."

B. The Council requires fees for land created by the filling of tidal waters and the long-term (dead) storage of vessels. Factors to be considered in establishing the fee include:

1) The degree of preemption associated with the activity or alteration involved;

2) The degree of irreversibility associated with the activity or alteration;

3) The value of opportunities for other activities lost to the public as the result of the activity; and

4) The economic return to the applicant resulting from pursuing the activity of making the permitted alterations.

Payments required by the fee shall be determined by the Council upon the completion of a professional appraisal based on the criteria listed above. The Assent recipient shall bear the cost of the appraisal.

Where public access is provided, the fee may be reduced by Council. In considering the reduction of fees, the Council shall determine the amount of public access, the potential use by the public of this public access, and any other relevant considerations.

C. A Council Assent for aquaculture activities within tidal waters and coastal ponds excluding seasonally deployed aquaculture apparatus such as spat collectors and experimental gear sites, as approved by the council, may include a lease for the approved site.

1) The annual fee is seventy-five ($75.00) for half an acre or less, one hundred and fifty dollars ($150.00) for a half to one acre, and one hundred dollars ($100.00) for each additional acre. Transient gear lease fees are based on the square footage of the cages, as follows: seventy-five dollars ($75.00) for 600 square feet or less, one hundred dollars ($100.00) for 601 to 1,200 square feet, one hundred and fifty dollars ($150.00) for 1,201-2,400 square feet, and seventy-five ($75.00) for each additional 1,200 square feet. Annual lease fees are payable in full, in advance, on the first business day in the month of January of each year during the Assent period. Any assignment or sublease of the whole or any portion of a leased area shall contstitute a breach of the lease and be cause for termination of the lease, unless such assignment or subletting has received the prior approval of the Council.

2) In the event a lease holder fails to make full payment of the annual lease fee within the time period establised within the lease, for each rental year, the lease agreement shall be terminated, and all Assents and authorities granted shall be revoked. In the event the leased area is not actively used for a period of one year, the lease shall be terminated and the Assent shall be revoked. Lease holders shall be notified 60 days prior to such revocation and may appeal the recovation to the full Council.

3) Persons wishing to deploy small-scale seasonal apparatus such as spat collectors or experimental aquaculture gear, shall apply for a Council Assent and may, at the discretion of the full Council be charged a lease fee.

D. Whenever the Council receives an application for assent or modification of an assent for an activity or alteration which has already occurred, or has been constructed or partially constructed, the Council may charge an administrative fee, in addition to any other fees required by the Council which shall be assessed at the time the Council grants an assent. The Council shall assess the administrative fee taking into account the additional demand on Council resources, and/or any adverse impacts to the coastal environment and/or the adjacent waterway. This shall not be construed to, and in no way shall, prohibit the Council from seeking any other remedies it deems appropriate.

Section 170.
Violations and Enforcement Actions

A. Chapter 23, Section 3, Subsections 46-23 GLRI sets out the Council's authorities for enforcement.

B. Whenever a member of the staff or a Coastal Resources Management Council Member witnesses a violation of the CRMC Plan or Assent, that individual is hereby authorized to issue a warning to the person violating the Plan on a form approved by the CRMC and a report of that warning shall be delivered by the staff or Council member to the Executive Director upon issuance.

C. In determining the amount of each administrative penalty, assessed in accordance with authorities established in Paragraph A, the Hearing Officer or his designee shall consider any scheduled amounts adopted by the Council and all other factors, which he deems relevant, including but not limited to:

(1) The actual and potential impact on public health, safety and welfare and the environment of the failure to comply;

(2) The actual potential damages suffered, and actual or potential costs incurred, by the Council, or by any other person;

(3) Whether the person being assessed the administrative penalty took steps to prevent noncompliance, to promptly come into compliance and to remedy and mitigate whatever harm might have been done as a result of such noncompliance;

(4) Whether the person being assessed the administrative penalty has previously failed to comply with any rule, regulation, order, permit, license or approval issued or adopted by the commission, or any law which the commission has the authority or the responsibility to enforce;

(5) Making compliance less costly than noncompliance;

(6) Deterring future noncompliance;

(7) The amount necessary to eliminate the economic advantage of noncompliance including but not limited to the financial advantage acquired over competitors from the noncompliance;

(8) Whether the failure to comply was intentional, willful or knowing and not the result of error;

(9) Any amount specified by state and/or federal statute for a similar violation or failure to comply;

(10) Any other factor(s) that may be relevant in determining the amount of a penalty, provided that the other factors shall be set forth in the written notice of assessment of the penalty; and

(11) The public interest.

Section 180. Emergency Assents

1. Catastrophic Storms Assent

A. The Executive Director may grant an Emergency Assent when catastrophic storms, flooding, and/or erosion has occurred at a site under Council jurisdiction, and where, if immediate action is not taken, the existing conditions may cause one or more of the following:

1) Immediate threat to public health and safety;

2) Immediate and significant adverse environmental impacts;

These Emergency Assents may permit only such action at the site that will correct conditions (1) and (2) above in a manner consistent with the policies of the Program.

2. Imminent Peril Assent

A. The Chairman, Vice Chairman, or in their absence the Executive Director, may grant an Emergency Assent in circumstances where they determine that there is imminent peril and where, if immediate action is not taken, the existing conditions may cause one or more of the following:

(1) Bodily harm or a threat to public health;

(2) Significant adverse environmental impacts; or

(3) Significant economic loss to the State.

B. The reasons for these findings shall be stated on the record.

3. Post Hurricane and Storm Permitting Procedures

A. It shall be the policy of the Council to establish emergency procedures for the issuance of assents in the event of the following:

(1) A hurricane, severe storm or other disaster has caused severe and widespread damage in portions of CRMC jurisdiction; and

(2) The Governor has submitted a formal request to the President to declare areas within CRMC jurisdiction a major disaster area; and

(3) The Executive Director of the CRMC determines the probable number of applications for CRMC assents resulting directly from the disaster will cause significant delays in the orderly processing of assents and, thereby impose an undue hardship on disaster victims and other applicants; and

(4) The CRMC shall provide adequate public notice of its decisions to impose emergency procedures.

B. The Council encourages other state agencies and each coastal community to adopt emergency permitting procedures equivalent to those of the CRMC in order to speed appropriate reconstruction and minimize adverse economic and environmental impacts.

C. The Council shall impose a temporary moratorium to remain in effect for a maximum of 30 days from the disaster declaration. The purpose of the moratorium shall be to provide the Council and affected coastal communities with adequate time to assess damages, determine changes in natural features that may change vulnerability to damage, and identify mitigation opportunities. The temporary moratorium shall apply to the following:

(1) Applications for new alterations and activities requiring Council Assent, which do not result from the disaster.

(2) Reconstruction of all residential and associated residential structures, commercial and recreational structures in both A-zone and V-zone that were destroyed by 50% or more by storm induced flood, wave and wind damage.

D. During the moratorium, priority consideration will be given to necessary and/or emergency alterations, reconstruction, or replacement of essential public facilities, such as roads, bridges, and public utilities. The Council recognizes that a major hurricane or other storm events may severely damage or destroy infrastructure and utilities such as roads, bridges, water and sewer lines located in high hazard areas. When such damage occurs, it shall be the policy of the Council to require the review of alteration reconstruction options which may lessen or mitigate the probability of future recurrent damage.

E. During the moratorium the Executive Director of the Council shall solicit the recommendations of the Rhode Island Department of Environmental Management and the local municipalities for the purchase of open space or other mitigative responses in high damage areas and make a policy decision about repermitting according to best available options for hurricane mitigation.

F. Procedures and priorities for addressing post storm reconstruction applications after the moratorium are as follows:

1) Priority will be given to consideration of applications for reconstruction of structures which were physically damaged or destroyed 50 percent or more by storm-induced flooding, wave or wind damage.

2) Applicants for repair or reconstruction in A, B, or C flood zones, as delineated in the FEMA maps, may follow the procedures in Section 300.14 Maintenance.

3) Final priority will be given to any application for new alterations and activities unrelated to the disaster.

4) If the Executive Director determines that a large number of post-storm applications will be received, and that the normal processing will result in an undue burden or hardship to storm victims, and the Executive Director determines there is no over-riding programmatic policy of goal to be served by holding a group of applications, then the Executive Director may, in specific instances, waive the requirements of a new Assent for structures physically destroyed 50 percent or more by storm-induced flood, wave and wind damage, and allow for Emergency Permits to be issued.

Part Two.

Areas Under Council Jurisdiction

Section 200. Tidal and Coastal Pond Waters

A. Introductory Findings

1. Rhode Islanders have a deep commitment to their coastal environment. Their concern for Narragansett Bay and the South Shore coastal ponds has been voiced in numerous ways, including support of landmark legislation in 1971 that created the Coastal Resources Management Council, endorsement of many of the efforts of environmental organizations such as Save the Bay and the Audubon Society of Rhode Island, and passage of the largest bond issue in the state's history in order to relieve chronic pollution in upper Narragansett Bay caused by the antiquated Providence municipal sewage treatment plant. The concerns of the public have in large measure been responsible for decisions not to build oil refineries in Jamestown and Tiverton, and to halt the indiscriminate destruction of salt marshes and the improper disposal of dredged spoils. Narragansett Bay is widely accepted as the state's greatest resource, and our coastal waters and shoreline are the focus not only of tourism but of efforts to attract new businesses into the state. Rhode Island strives to maintain the image of a desirable place to work and raise a family, and these attributes are inextricably bound to a varied and beautiful shoreline, where water quality and, no less important, visual quality are excellent and well protected. The qualities that make Rhode Island's coast beautiful and an unparalleled recreational resource are fully as important as the more readily quantifiable commercial and industrial water-dependent activities. The designation of large stretches of waters or coastline for conservation and low-intensity use by this Program recognizes these facts and will help maintain a high quality of coastal environment for future generations of Rhode Islanders.

2. The six categories of waters defined in this Program are directly linked to the characteristics of the shoreline, since the activities on the adjacent mainland are the primary determinant of the uses and qualities of any specific water site. Thus, Type 1 waters abut shorelines in a natural undisturbed condition, where alterations, including the construction of docks and any dredging, are considered by the Council as unsuitable. Type 2 waters are adjacent to predominantly residential areas, where docks are acceptable, but more intense forms of development, including more marinas and new dredging projects (but not maintenance dredging), would change the area's character and alter the established balance among uses. Alterations such as these would bring more intensive uses and are therefore prohibited in Type 2 waters. The waters along some 70 percent of the state's 420 miles of shoreline have been assigned to Type 1 and Type 2, and should be expected to retain their high scenic values and established patterns of low-intensity use. Type 3 waters are dominated by commercial facilities that support recreational boating. Here, marinas, boatyards, and associated businesses take priority over other uses, and dredging and shoreline alterations are to be expected. Type 4 areas include the open waters of the Bay and the Sounds, where a balance must be maintained among fishing, recreational boating, and commercial traffic. Here high water quality and a healthy ecosystem are primary concerns. The last two water use categories are assigned to areas adjacent to ports and industrial waterfronts. In these waters, maintenance of adequate water depths is essential, high water quality is seldom achievable, and some filling may be desirable. Within Type 5 ports, a mix of commercial and recreational activities must co-exist, while in Type 6 waters, water-dependent industrial and commercial activities take precedence over all other activities. The water categories described in this section are complemented by policies for shoreline types (Section 210), and the two must be combined to identify the Program's policies for a specific coastal site.

3. More than 90 percent of Rhode Island's tidal waters are classified by the R.I. Department of Environmental Management as SA, the highest water quality rating. Water pollution, however, is a major concern, with eutrophication and bacterial contamination a growing concern in the salt ponds and with all major indicators of pollution showing strong gradients down the Bay from the Providence metropolitan area. Despite the pollutants and intense fishing pressure, Rhode Island's tidal waters support large seasonal populations of a variety of finfish. In the Bay, the quahog supports a large and important commercial fishery. Recreational fishing for flounder, bluefish, and striped bass is important nearshore.

4. Rhode Island has a rich history of maritime commerce and industry. In this century, however, the once-booming urban waterfronts of the upper Bay have stagnated and declined despite major infusions of public funds to deepen the access

channel to Providence to 40 feet and build new terminal facilities. During the postwar decades, oil imports have dominated waterborne commerce, but this sector has declined sharply since the mid-seventies. In 1973, the U.S. Navy announced a major pullout from its extensive facilities in the lower Bay, and by 1980 hundreds of acres of port facilities at Quonset, Davisville, Melville, and Coddington Cove had been turned over to the state. The State of Rhode Island now owns a large inventory of unutilized or underutilized port facilities. As commercial shipping has declined, recreational boating has increased. Facilities for the in-water storage of boats are in short supply, but with very few exceptions expansion of marinas into new areas could only be accomplished if remaining salt marshes and other important natural features were sacrificed. Since this is considered unacceptable by the Council, the emphasis must be on the more efficient use of existing facilities, recycling of underutilized but already disturbed sites, and improvements to public launching facilities.

5. Activities that are dependent on Rhode Island's tidal waters generate substantial economic benefits to the state. Nearly one billion dollars are generated each year by such water-related activities as marine industry, transportation and education, commercial fishing and marine recreation (Farrell and Rorholm, 1981). Substantial additional economic benefits are generated by water-enhanced residential development, tourism, and the importance of an attractive marine environment in drawing high-quality businesses to Rhode Island.

Section 200.1
Type 1 Conservation Areas

A. Definition

Included in this category are one or more of the following: (1) water areas that are within or adjacent to the boundaries of designated wildlife refuges and conservation areas, (2) water areas that have retained natural habitat or maintain scenic values of unique or unusual significance, and (3) water areas that are particularly unsuitable for structures due to their exposure to severe wave action, flooding, and erosion.

B. Findings

1. The coastline that fronts directly on Long Island and Block Island Sounds includes some of the most dynamic and naturally scenic features in Rhode Island. These include but are not limited to the South Shore barriers and headlands, the erosion-prone bluffs of Block Island, and Newport's rocky promontories. In order to adequately preserve these shorelines in these conservation areas, many activities proposed on shoreline features or in the tidal waters directly adjacent to these features must be severely restricted or prohibited.

2. Brigg's Marsh in Little Compton, Sachem Pond on Block Island, and Hundred Acre Cove in Barrington are examples of water areas which have exceptional value as waterfowl nesting and feeding habitat. Rare and unique assemblages of plants and animals and rich shellfish beds are found in these undisturbed waters. Many, but not all, water areas of well-recognized significance to wildlife are within established sanctuaries or management areas.

3. Opportunities for scientific research and education have been enhanced by the designation of a National Estuarine Sanctuary in the upper Bay, one of some 15 similar designations nationwide. The sanctuary includes Bay waters extending to the 18-foot depth contour around Patience Island, the northern half of Prudence Island, and Hope Island.

4. Valuable conservation areas are not all in clean, rural environments. For example, Watchemoket Cove in the heart of the East Providence industrial waterfront is an important waterfowl resting area, particularly during the winter months when large numbers of canvasbacks, scaup, widgeon, and black ducks are present.

5. Several stretches of shoreline within Narragansett Bay have survived the rapid proliferation of residential development during recent decades in pristine condition. Examples include the Potowomut River, the Palmer River in Barrington and Warren, and the Mt. Hope Cliffs in Bristol. It is important that as much of this land as practicable be preserved from alteration to assure that Rhode Island's rich diversity of shoreline types and high scenic value are preserved.

C. Policies

1. The Council's goal is to preserve and protect Type 1 waters from activities and uses that have the potential to degrade scenic, wildlife, and plant habitat values, or which may adversely impact water quality or natural shoreline types.

2. The mooring of houseboats and floating businesses, the construction of recreational boating facilities, filling below mean high water, point discharge of substances other than properly treated runoff water (see Section 300.6), and the placement of industrial or commercial structures or operations (excluding fishing and aquaculture) are all prohibited in Type 1 waters.

3. In Type 1 waters, activities and alterations including dredging, dredged materials disposal, and grading and excavation on abutting shoreline features are all prohibited unless the primary purpose of the alteration or activity is to preserve or enhance the area as a natural habitat for native plants and wildlife or a beach renourishment/ replenishment project. Structural shoreline protection facilities shall not be permitted to preserve or enhance these areas as a natural habitat or to protect the shoreline feature. Notwithstanding the Council's prohibition against construction of recreational boating facilities in Type 1 Waters, the Council recognizes that some residential boating facilities may have pre-existed in Type 1 Waters prior to the formation of the Council. The Council's ultimate goal is to remove said structures and restore the areas involved to be free of all recreational boating facilities. Although recreational boating facilities are inconsistent with the Council's goals for Type 1 Waters, in order to provide for the equitable transition and compliance

with the Council's goals pre-existing residential boating facilities may be permitted under the limited terms and conditions set forth in Section 300.4 of the RICRMP and the Council's Dock Registration Program.

4. Since runoff can be a major source of pollutants from developed areas, new or enlarged point discharges of untreated runoff shall be permitted in Type 1 waters only when it is demonstrated that no reasonable alternative exists and that no significant adverse impact to the receiving waters will result. The cumulative impacts of runoff are of particular concern in Type 1 waters.

5. Applicants for Council Assents for alterations or activities in or contiguous to Type 1 waters shall describe the measures taken to mitigate impacts on the scenic quality of the area (see Section 330).

6. Activities and alterations subject to Council jurisdiction contiguous to public parks, public beaches, public rights-of-way to the shore, and conservation areas abutting Type 1 waters shall not significantly interfere with public use and enjoyment of such facilities. Where significant interference is found, the Council shall suitably modify or prohibit that alteration or activity.

Section 200.2
Type 2 Low-Intensity Use

A. Definition

This category includes waters in areas with high scenic value that support low-intensity recreational and residential uses. These waters include seasonal mooring areas where good water quality and fish and wildlife habitat are maintained.

B. Findings

1. Type 2 waters are similar to Type 1 waters in their high scenic qualities, high value for fish and wildlife habitat, and, with some exceptions, good water quality. Densely developed residential areas abut much of the waters in this category, and here docks and the activities and small-scale alterations associated with residential waterfronts may be suitable.

2. Major portions of the salt ponds along the South Shore between Watch Hill and Point Judith are assigned to Type 2 waters. Nearly all have retained their scenic and natural characteristics while accommodating residential docks, minor dredged channels, and small-scale shoreline protection structures. Each coastal pond is an individually distinct ecosystem and a unique feature of great scenic value. Continuing residential development within the watersheds of the salt ponds poses severe threats to future water quality in the form of both bacterial contamination and eutrophication. Permanent breachways built in the 1950s to provide easy access for boats to the ocean have radically altered the ecology of many of the larger ponds and are causing rapid siltation within the ponds.

3. Waters along open coasts which support low-intensity uses associated with residential areas are found along stretches of the lower Bay. An example is the Sakonnet River, which separates Aquidneck Island from Tiverton and Little Compton. The Sakonnet's waters are of high quality except for small areas adjacent to the few densely developed areas, and its shorelands are varied and picturesque, displaying large salt marshes, rocky cliffs, open agricultural fields, and wooded shoreline. The upper half of the Sakonnet River is a productive quahog ground and is fished commercially. Conchs are fished commercially throughout the river, and Almy Brook, which drains into the Sakonnet from Nonquit Pond, contains a sizable alewife run.

4. Several small riverine estuaries such as the Kickemuit River in Warren and the Pettaquamscutt (Narrow) River in Narragansett, South Kingstown, and North Kingstown are also assigned to Type 2 waters. These rivers contain extensive salt marshes and rich diversity of fish, shellfish, and waterfowl. Extensive residential development and restricted flushing combine to pose severe water quality concerns similar to those in the more developed salt ponds. Scenic values, however, remain high, and local residents are highly concerned that activities such as shellfishing and swimming are maintained and not preempted by poor water quality.

C. Policies

1. The Council's goal is to maintain and, where possible, restore the high scenic value, water quality, and natural habitat values of these areas, while providing for low-intensity uses that will not detract from these values.

2. New or deepened dredged channels and basins (termed "improvement dredging" by the Army Corps of Engineers); new marinas and expansion of pre-existing marinas in excess of 25 percent of their capacity; the mooring of houseboats and floating businesses; industrial and commercial structures and operations (excluding fishing and aquaculture); and filling are all prohibited in Type 2 waters. The Council's intent for pre-existing marina operations located in Type 2 Waters is to allow for their continued maintenance and viability as such operations. Maintenance dredging, dock reconfigurations, activities such as travellift operations and other best available technologies, and other ancillary activities necessary to maintain the operational viability of the facility, should be expected to occur at pre-existing marina operations in these waters. Structural shoreline protection facilities should not be prohibited. Such allowances will only be instituted at marina facilities with approved marina perimeters (see Section 300.4.E) and will be reviewed in accordance with applicable standards of Section 300.4.E. In order to be eligible for this policy, applications for marina perimeters must be submitted to the CRMC by April 1, 1994.

Current capacities of pre-existing marinas, as found in CRMC-approved special area management plans, and similar management plans, should be recognized and no attempt should be made to require these pre-existing marinas to meet their capacities as of January 1981.

3. Residential boating facilities, public launching ramps, and structural shoreline protection facilities may be permitted in Type 2 waters, provided it can be demonstrated that there will be no significant adverse impact to coastal resources, water dependent uses or public's use and enjoyment of the shoreline and tidal waters of the State. It is the Council's policy that one or more of the following conditions describe a situation, condition, or proposal that is deemed to have a significant adverse affect on Rhode Island's coastal resources and therefore is grounds for denial or modification of an application for an Assent:

(a) The construction of the proposed facility may cause significant impacts on coastal wetlands and other public trust resources (e.g. shellfish, finfish, submerged aquatic vegetation, etc.);

(b) Access to the construction site is not available without causing significant impacts to Rhode Island's coastal resources (e.g. coastal wetlands);

(c) The proposed facility would significantly interfere with and/or impact other public trust uses of the tidal or inter-tidal areas of the shoreline (e.g. interfere with navigation);

(d) Water depths adjacent to the site would require dock span lengths in excess of the standards contained in Section 300.4.E in order to allow normal and appropriate use of the dock by a vessel.

4. Applicants for Council Assents for alterations or activities in Type 2 waters shall describe the measures taken to mitigate impacts on the scenic quality of the area (see Section 330).

5. Since runoff can be a major source of pollutants from developed areas to poorly flushed estuaries, new or enlarged discharges shall be permitted into the following Type 2 waters only when it is demonstrated that no reasonable alternative exists and that no significant adverse impact to the receiving waters will result:

(a) Winnapaug Pond
(b) Quonochontaug Pond
(c) Ninigret Pond (Charlestown Pond)
(d) Green Hill Pond
(e) Potters Pond
(f) Point Judith Pond
(g) Nannaquaket Pond
(h) Palmer River
(i) Kickemuit River
(j) Fishing Cove (Wickford)
(k) Pettaquamscutt River

6. Activities and alterations subject to Council jurisdiction contiguous to public parks, public beaches, public rights-of-way to the shore and conservation areas abutting Type 2 waters shall not significantly interfere with public use and enjoyment of such facilities. Where significant interference is found, the Council shall suitably modify or deny that alteration or activity.

Section 200.3
Type 3 High-Intensity Boating

A. Definition

This category includes intensely utilized water areas where recreational boating activities dominate and where the adjacent shorelines are developed as marinas, boatyards, and associated water-enhanced and water-dependent businesses.

B. Findings

1. Marinas are the principal means by which the boating public gains access to tidal waters, and therefore provide an important public service. Only beachgoing involves more Rhode Islanders in a recreation activity that makes direct use of tidal waters. In 1978, some 65 percent of all slips and moorings were within marinas and yacht clubs, and nearly all of these are within Type 3 waters.

2. Marinas face a number of difficulties. The boating season in Rhode Island is confined to six months, with most of the activity concentrated in June, July, and August. Many marina operations have difficulty in generating income during the remainder of the year and are economically marginal businesses. Nearly all the existing marinas were built when the value of waterfront property was far lower than it is today, and the pressure is mounting to convert marginal operations occupying high-value waterfront land to more profitable uses.

3. Areas suitable for marinas are severely limited, and the steady growth in the number of recreational boats is increasing the competition for the available facilities. Unfortunately, sheltered waters suitable for marinas are limited, and most of the remaining potential sites contain salt marshes that could only be developed at great environmental as well as high economic costs. Persons proposing new marinas are also hampered by local zoning and high land costs, and neighborhood opposition is frequently vociferous. The solution to growing demand is therefore to use the available facilities more efficiently and to recycle already altered sites in the upper Bay and on excessed Navy holdings, such as Allens Harbor in North Kingstown and along the Aquidneck west shore.

4. In many locations, marina operators are plagued with siltation problems and find it difficult to find acceptable sites for their dredged materials. Dredging problems can be best solved if the marina operators within a cove or harbor join together to finance the dredging and find a common local solution to the disposal problem. Options such as marsh building, beach nourishment, or the transport of materials to a more distant location become technically and economically feasible when a sufficiently large volume of material is to be moved and a united effort to solve the problem is organized.

5. The growth in the size of the recreation fleet, limited berthing opportunities, and the increasing expense of in-water storage have contributed to rapid growth in the number of trailered boats. This has placed a heavy demand on public launching ramps, which are in short supply and many of which are in deteriorating condition or have limited parking capacity.

6. Type 3 waters and the adjacent shoreline, while utilized intensely for the needs of the recreational boating public, nevertheless retain numerous natural assets of special concern to the Council. These include coastal wetlands, and the value these areas provide as fish and shellfish spawning and juvenile rearing grounds. These factors must be weighed when the Council considers proposals that may impact these assets.

C. Policies

1. The Council's goal is to preserve, protect, and, where possible, enhance Type 3 areas for high-intensity boating and the services that support this activity. Other activities and alterations will be permitted to the extent that they do not significantly interfere with recreational boating activities or values.

2. The highest priority uses of Type 3 waters and adjoining land areas within the Council jurisdiction are (a) marinas, mooring areas, public launching ramps, and other facilities that support recreational boating and enhance public access to tidal waters; and (b) boatyards and other businesses that service recreational boaters.

3. The Council encourages marinas to seek innovative solutions to increased demands for moorings, dockage, and storage space, and allows marina operators to alter the layout of their facilities (see Section 300.4).

4. The Council shall encourage more and improved public launching facilities by protecting existing facilities from interference by other uses subject to Council jurisdiction, identifying appropriate sites for new ramps and parking areas, and working with other agencies to build new ramps and maintain existing facilities.

Section 200.4
Type 4 Multipurpose Waters

A. Definition

This category includes (1) large expanses of open water in Narragansett Bay and the Sounds which support a variety of commercial and recreational activities while maintaining good value as a fish and wildlife habitat; and (2) open waters adjacent to shorelines that could support water-dependent commercial, industrial, and/or high-intensity recreational activities.

B. Findings

1. The open waters of Narragansett Bay and the Sounds are used for a number of purposes including commercial and sport fishing, boating, commercial shipping, aquaculture, and scientific research. These areas are highly productive of fish and shellfish, and support substantial commercial fisheries including a small dragger fishery, seasonal lobstering, and shellfishing. The overwhelming majority of activity is in shellfishing, particularly quahogging. The quahog fishery has grown steadily over the past decade, and in 1980 the reported landings of quahog meats peaked at an all-time high of 3.5 million pounds, worth over $11 million. It is generally accepted that the reported catch is substantially less than the actual. In 1980, Rhode Island supplied more than one-quarter of the nation's total harvest, and the fishery provided full-time employment to some 1,300 fishermen and part-time employment to an additional 2,300. The boundaries of principal grounds for the quahog trawler and lobster fisheries are shown in a general manner on maps in "An Aquaculture Management Plan for Rhode Island Coastal Waters," prepared in 1981 by W.J. Lapin of the Department of Environmental Management. A significant portion of the Bay's quahog beds is in upper Bay areas permanently closed to shellfishing, and many of the currently most productive grounds are closed for much of the year. Water pollution is thus a major threat to the Bay's shellfisheries.

2. In the early years of this century, the Bay supported a lucrative oyster culture industry. In 1910, some 20,000 acres of Bay bottom were leased to private growers. Conflicts between oyster growers and commercial shellfishermen were intense. The oyster industry began a rapid decline in the 1930s and ended in 1957. In the late 1970s, a new form of aquaculture using intensive off-bottom culture methods was proposed for several locations. By mid-1982 three leases had been granted by the Council in the Bay and in the coastal ponds. Commercial fishermen oppose the re-establishment of aquaculture in the Bay fearing encroachment on their grounds and impacts on shellfish prices. Aquaculturists argue that their intensive methods need not compete with traditional fisheries for prime grounds and that aquaculture could provide the state with a new industry, providing jobs and revenues from a renewable native resource. Aquaculturists use floating structures such as rafts or lines suspended form buoys or may conduct their activities on the bottom. Most aquacultural activities involve fixed and relatively permanent structures. While the species potentially suitable for aquaculture are almost unlimited, the species of current interest for Narragansett Bay are mussels, oysters, and quahogs.

3. Boaters and sport fishermen are another major user group of Type 4 waters. The majority of the state's estimated 33,000 (1979) recreational boats are used on the Bay. Sport fishermen take large numbers of flounder, bluefish, and striped bass each year. The scenic qualities of the Bay, good water quality, and control over preemptive uses are essential to all recreational users.

4. A major concern to all users of Type 4 waters is good water quality. The major source of all principal pollutants to the Bay, including pathogenic bacteria, nutrients, petroleum hydrocarbons, metals, and exotic organic chemicals, are the urban and industrial centers that discharge into the Providence River. Strong down Bay gradients are seen in both the sediments and water column for all these pollutants. The long-term combined impacts of pollutants on the Bay ecosystem are not well understood. There is evidence, however, that pollutants that enter the Providence River may be impacting the Bay as far south as Hope Island. The major sources of pollutants to the Bay are the rivers that drain some 2,000 square miles in Rhode Island and Massachusetts, the effluents from sewage treatment plants, and urban runoff.

C. Polices

1. The Council's goal is to maintain a balance among the diverse activities that must coexist in

Type 4 waters. The changing characteristics of traditional activities and the development of new water-dependent uses shall, where possible, be accommodated in keeping with the principle that the Council shall work to preserve and restore ecological systems.

2. The Council recognizes that large portions of Type 4 waters include important fishing grounds and fishery habitats, and shall protect such areas from alterations and activities that threaten the vitality of Rhode Island fisheries.

3. Aquaculture leases shall be considered if the Council is satisfied there will be no significant adverse impacts on the traditional fishery.

4. The Council shall work to promote the maintenance of good water quality within the Bay. While recognizing that stresses on water quality will always be present in urban areas such as the Providence River, the Council shall work to promote a diversification of activities within the upper Bay region through the water quality improvement process.

Section 200.5

Type 5 Commercial and Recreational Harbors

A. Definition

These waters are adjacent to waterfront areas that support a variety of tourist, recreational, and commercial activities. They include all or portions of the following harbor areas:

(1) Newport Harbor
(2) Bristol Harbor
(3) Warren waterfront
(4) Wickford Harbor
(5) Old Harbor, Block Island
(6) East Greenwich Harbor
(7) Watch Hill Harbor

B. Findings

1. Type 5 waters all support a vibrant mix of commercial and recreational waterfront activities. All have important historic value that must be preserved. Competition for space is intense in all Type 5 waters, commercial fishing vessels, recreational boats, and ferries compete for limited water space, while waterfront businesses of many varieties vie for a position on the waterfront. The visual quality of these areas is highly important, since all are centers for tourism.

C. Policies

1. The Council's goals are to maintain a balance among diverse port-related activities, including recreational boating, commercial fishing, restaurants, and other water-enhanced businesses; to promote the efficient use of space; and to protect the scenic characteristics that make these areas valuable to tourism.

2. The highest priority uses of Type 5 waters and adjoining land areas within Council jurisdiction are (a) berthing, mooring, and servicing of recreational craft, commercial fishing vessels, and ferries; (b) water-dependent and water-enhanced commerce, including businesses catering to tourists; (c) maintenance of navigational channels and berths, and removal of obstructions to navigation; and (d) activities that maintain or enhance water quality and scenic qualities, including the preservation of historic features. The Council shall suitably modify or prohibit activities that significantly detract from or interfere with these priority uses.

3. Applicants for Council Assents for alterations or activities in Type 5 waters shall describe measures taken to mitigate impacts on the scenic quality of the area (see Section 330).

Section 200.6
Type 6 Industrial Waterfronts and Commercial Navigation Channels

A. Definition

These water areas are extensively altered in order to accommodate commercial and industrial water-dependent and water-enhanced activities. They include all or portions of the following areas:

(1) Port of Providence
(2) Tiverton shipping area
(3) Quonset Point and Davisville
(4) Coddington Cove
(5) Melville
(6) Galilee and Jerusalem
(7) Westerly waterfront

B. Findings

1. The Port of Providence extends some ten miles along the Providence and East Providence shores of the Providence River and is the state's principal general cargo and petroleum port. Import and export of products moving through the port have a major impact on the state's economy and generate jobs and economic activity in many other sectors. In fiscal 1981, 5.3 million tons of petroleum, steel, cement, automobiles, lumber, scrap metal, and other non-petroleum commodities were received or shipped. The Providence shipping channel is dredged to an authorized depth of 40 feet. Large segments of shoreline and water in the port area are in derelict condition and littered with abandoned piers and sunken barges. Efforts to expand and improve the port have been underway for many years. In East Providence, across the channel from the Providence municipal wharf, the Providence and Worcester Railroad Company has made large investments in a major new landing pier. On the Providence side, infusions of public funds have brought many improvements, but much remains to be done. Priority problems include the difficulty in finding acceptable sites for dredged materials produced by maintaining or improving existing channels and berths, and the need to remove some 26,000 cubic yards of debris that forestalls the reuse of presently derelict areas. Coordinated planning and development efforts are essential to any initiative to improve the port and make it more competitive.

2. In the 1970s large-scale port facilities and waterfront industrial sites at Quonset-Davisville, Coddington Cove, and Melville were declared surplus by the Navy. These sites are available for redevelopment principally through the R.I. Port Authority. Some of the port facilities in these areas are in disrepair, and will require major infusions of capital if they are to be reused, while others are in good condition and are in active use for shipbuilding and other water-dependent purposes. These facilities, when combined with the derelict waterfront in the Providence River, give the state a large inventory of unutilized or underutilized port facilities.

3. Rhode Island supports a thriving offshore commercial fishing industry based at the ports of Galilee and Newport. Galilee is home port to some 160 vessels, which landed 56 million pounds of fish and shellfish worth $11.7 million in 1982. The port facilities at Galilee are owned by the state and managed by the Department of Environmental Management. A large portion of the 21 million pounds of fish and shellfish worth $13 million (1979) landed at Newport is caught by vessels that have home ports out of state. Fishing vessels berthing at Newport utilize facilities managed under lease by the Department of Environmental Management. Rhode Island's commercial fishing fleets are growing but are severely hampered by limited berthing and unloading facilities. An expansion and improvement program of the state facilities at Galilee and Newport has been underway for a decade.

4. Nearly all Rhode Island's boating and shipping facilities require periodic dredging to maintain adequate water depths in channels and turning basins and at berths. Until the mid-sixties, dredge spoils were disposed with little concern for environmental impacts. Salt marshes were filled, new sandbars and spits created, and the largest project in recent history, the deepening of the Providence channel from 30 to 40 feet, left a large spoil mound off Brenton Reef in the Sound and a legacy of vehement opposition by fishing interests to any offshore disposal. For the past two decades, finding acceptable solutions to dredged materials disposal needs has proved difficult. Salt marsh building, bulkheading, and beach nourishment are frequently viable solutions where small volumes are concerned, but offshore dumping may be the only cost-effective solution for large projects. All solutions raise concerns, and energetic opposition is frequently organized. Finding acceptable, environmentally sound

solutions to dredged materials disposal remains an important challenge for the coastal program.

C. Policies

1. The Council's goals for Type 6 waters and adjacent lands under Council jurisdiction are to encourage and support modernization and increased commercial activity related to shipping and commercial fisheries.

2. Highest priority uses of Type 6 waters and adjacent lands under Council jurisdiction are: (a) berthing, loading and unloading, and servicing of commercial vessels; (b) construction and maintenance of port facilities, navigation channels, and berths; and (c) construction and maintenance of facilities required for the support of commercial shipping and fishing activities.

The Council shall prohibit activities that substantially detract from or interfere with these priority uses.

3. The Council will encourage and support port development and modernization and increased economic activity in the marine industries by participating wherever possible in the joint long-range planning and development activities with other state and local agencies, including the R.I. Port Authority, the Department of Environmental Management, and coastal cities and towns.

4. Through its Special Area Management Plan for Providence Harbor, and other planning initiatives, the Council will identify and designate acceptable disposal solutions and sites adequate to meet the need for dredging, and provide the assurances required by industry that channel depths will be maintained, while minimizing environmental effects. The solutions may be more costly than older disposal practices, and may involve innovative technology. The Council will also work in cooperation with the Cities of Providence and East Providence and the Corps of Engineers toward achieving the removal of dilapidated piers and abandoned barges, which presently preclude economic use of large areas within Providence Harbor.

Section 210. Shoreline Features

A. Introductory Findings

1. A great variety of geologic forms can be found where tidal waters meet the land. Where a coast is exposed to the forces of the open ocean, as along the South Shore, sea cliffs and wide sand or gravel beaches predominate. In sheltered waters, salt marshes and mud flats are common. The shoreline of Narragansett Bay is composed principally of narrow beaches of pebbles and cobbles that are backed by an often unvegetated bluff of unconsolidated glacial sediment. Rhode Island's diversity of shoreline types provides a wealth of visually distinct areas, each of which supports different mixtures and intensities of use. This diversity must be recognized and maintained. The postwar decades have brought an explosion in the development of formerly rural coastal lands, and by the early 1980s most of the waterfront property that could be readily developed had been subdivided. Nearly all the remaining available parcels are within existing developments or they present natural constraints to the developer, such as poorly draining soils or steep slopes. Despite the recent surge of building along the lower Bay and South Shore, the coastline has retained much of its beauty. The appearance of long stretches of the coast from the water and vantage points along the shore provides a sense of natural beauty and open land; structures are not overly obtrusive. This quality, however, could be lost over the next few decades as the remaining farmland and estates, now worth great sums, come on the market and are sold off as house lots. Another major concern for the Council is the cumulative impact of individually minor alterations, particularly those brought about by residential development, on the qualities of the coastal environment.

2. All shoreline systems are dynamic, and change their shape and character in response to storms, tidal currents, human modifications, and the gradual rise in sea level. Twenty-five thousand years ago, at the time of maximum advance of the last glacial ice sheet, the ocean shoreline of Rhode Island was displaced over 15 miles seaward of Block Island. Sea level was lowered about 300 feet because ocean water was locked up in the glacial ice. Sea level began to rise as the ice melted, displacing the shoreline northward as the sea inundated Block Island Sound, and later, Narragansett Bay. The present rate of sea-level rise is about one foot per century due to subsidence of the land and thermal expansion of ocean waters.

3. A principal concern of waterfront property owners is frontal erosion and storm-surge flooding. The susceptibility of any length of shoreline to erosion is determined by the type of shoreline (see Table 3) and its exposure to storm surge and waves during severe storms and hurricanes. Storm surge occurs when a combination of low atmospheric pressure and the force of high winds over a large expanse of open water causes sea level to rise dramatically along the coast, particularly at the head of funnel-shaped embayments like Narragansett Bay. During the 1938 hurricane, the storm surge forced water levels 12 feet above mean high water at Point Judith and over 13 feet at Providence. Waves 10 feet high and more were measured on top of the surge level. Such events are not rare; the state has been struck by 73 hurricanes in the past 350 years, 13 of which have caused severe flooding and erosion. In this century, the 1938 hurricane left 311 dead and nearly 2,000 houses destroyed, and Hurricane Carol killed 15 people and destroyed 3,800 houses in 1954.

4. In Rhode Island, most shoreline erosion takes place during moderate and severe storms, with recovery of sediment to beaches and foredunes in intervening periods. Many of today's shorefront residents acquired property in the middle 1980's during a period of relatively few storms and are unfamiliar with sustained periods of storminess or high category hurricanes. Most private shoreline protection structures which predate the RICRMP are underbuilt or poorly designed with respect to major storms.

5. The federal flood insurance program guarantees subsidized insurance for buildings that meet defined construction standards in flood hazard areas. This program has encouraged building in some highly hazardous areas contrary to good coastal management practices.

Table 3. Shoreline Types and Their Susceptibility to Erosion (Adapted from Boothroyd and Al-Saud, 1978).

(A, most susceptible; E, least susceptible)

Type	*Characteristics*	*Example areas most susceptible to erosion due to their exposure*
Beaches (A)	Unconsolidated sand, gravel or cobbles, backed by a headland bluff.	• Oakland Beach (Warwick) • Matunuck Beach (S. Kingston) • Scarboro Beach (Narragansett)
Barrier Spits (A)	Unconsolidated sediment that forms a spit parallel to the mainland and separated from it by a marsh or pond; Sand dunes are often present.	• All South Shore barriers • South side Conimicut Pt. (Warwick) • Barrington Beach (Barrington) • Jenny Pond spit (Prudence Island) • Briggs Marsh barrier (Little Compton)
Headland Bluffs of Glacial Outwash (B)	Gravel, sand, silt, and clay deposited in glacial rivers and lakes as ice melted 15-18,000 years ago.	• Buttonwoods (Warwick) • Occupessatuxet Neck (Warwick) • Coggeshall (Warren) • Island Park (Portsmouth)
Headland Bluffs of Glacial Till (C)	Unsorted mixture of gravel to clay deposited in contact with glacier ice.	• Northeast side of Pt. Judith (Narragansett) • Briggs Pt. (Little Compton)
Soft Bedrock (D)	Sedimentary rock usually in the form of terraces or scalloped cliffs.	• East shore of the Bonnet (Narragansett) • East facing segment of the Newport Cliffs
Hard Bedrock (E) and Discontinuous Bedrock	Hard bedrock is composed of granite and metamorphic rocks; Discontinuous bedrock, either hard or soft, often extends from the shore as a natural breakwater.	• Least susceptible to erosion

Section 210.1
Coastal Beaches

A. Definitions

1. Coastal beaches include expanses of unconsolidated, usually unvegetated sediment commonly subject to wave action. Beaches extend from mean low water landward to an upland rise, usually the base of a dune, headland bluff, or coastal protection structure, pilings or foundation.

B. Findings

1. Beaches are dynamic, flexible features. The character of a beach is determined primarily by the particle size of the sediment and by the amount of wave and current action. Beaches are formed by sediment that are carried by waves and longshore currents from eroding headlands, from up current beaches in the longshore system, and from the subtidal shoreface portion of the shoreline. It is often difficult to establish the source of sediment for an individual beach, but shoreline protection facilities such as bulkheads, seawalls, groins, or jetties can alter significantly the volume supplied by suppressing the source or altering the transport of sediment along the shore. Such structures can retard erosion at one site while increasing erosion rates on an adjoining property. Beaches alter their volume and shape in response to regional weather patterns. During stormy periods, large waves erode the beach and foredune zone and deposit sediment offshore on the subtidal shoreface as bars or platforms. These bars function to dissipate wave energy and thus retard erosion of the intertidal beach. Sediment is transported from the shoreface back to the beach during periods of fair-weather by small waves and a broad berm is deposited. There are usually fewer storms in the summer then the other three seasons, thus the beach (berm) has more volume at that time; however, the passage of hurricanes may interrupt this trend. Longshore currents generated in the surf zone by waves striking the beach at an angle transport sediment in the direction of the open angle. Coastal protection structures that protrude onto the berm may interrupt the transport of sediment along the beach, resulting in deposition on the up current side and increased erosion downcurrent of the structure.

2. All beaches associated with barriers along the ocean shore and several isolated beaches within the Bay are important recreational resources that are used by some 100,000 residents and tens of thousands of out-of-state tourists on hot summer days.

C. Policies

1. The Council's goals are (a) to preserve the qualities of, and public access to those beaches which are an important recreational resource (adjacent to Type 1 and 2 waters); (b) to prevent activities that will significantly disrupt longshore and/or onshore-offshore beach processes, thereby creating an erosion or flooding hazard; and, (c) to prevent construction in high hazard areas; and, (d) to protect the scenic and ecologic value of beaches.

2. Alterations to beaches adjacent to Type 1 and Type 2 waters are prohibited except where the primary purpose of the project is to preserve or enhance the area as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature.

3. Alterations to beaches adjacent to Type 3, 4, 5, and 6 waters may be permitted if (a) the alteration is undertaken to accommodate a designated priority use for the abutting water area; (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable; (c) only the minimum alteration necessary to support the designated priority use is made; (d) there is no change in the usage of the property; (e) there is no change in the footprint of existing structures; and, (f) the construction will meet all current and applicable policies, standards, and requirements of the RICRMP.

4. Vehicular use of beaches, where not otherwise prohibited or restricted by property owners or by private or public management programs, is permitted only under the following conditions:

(a) Motorcycles, minibikes, snowmobiles, all-terrain motorized cycles and tricycles are prohibited except for authorized management-related vehicles.

(b) A Coastal Resources Management Council annually renewable use permit is required for all vehicles. Such permits may be obtained for a

fee subject to the following requirements and conditions. In the event these requirements and conditions are not met, the use permit shall be subject to revocation by the Council or its agents:

(1) Vehicles shall have all documentation and registration necessary for operation on the public highways of this state.

(2) All permit applicants shall exhibit proof of current liability insurance coverage.

(3) All persons operating said vehicles shall have valid operator licenses.

(4) Maximum speed on all beaches shall not exceed 10 mph. Maximum speed on beaches shall not exceed 5 mph when approaching pedestrians.

(5) Ruts or holes caused by vehicles shall be filled and debris removed.

(6) Headlights shall be used by all vehicles while in motion between sunset and sunrise.

(7) Riding on or driving from any position outside the vehicles is prohibited.

(8) Vehicles are prohibited on swimming beaches during the period they are protected by lifeguards and in operation.

(9) Vehicles shall be at all times subject to town ordinances and all regulations restricting the use of private, state and federal properties.

5. The Council requires, for the operator's safety and benefit, that every vehicle operated on a beach carry the following equipment (in good working order):

(a) shovel (heavy-duty or military entrenching tool);

(b) tow rope or chain (15 feet, load strength of 1,800 lbs., chain size 5/16");

(c) jack and support stand (minimum 18" x 18" x 5/8", plywood);

(d) street legal tires (4-ply tread, 2-ply sidewalls) - snow or mud tires are not recommended;

(e) spare tire;

(f) low-pressure tire gauge (0-20 lbs.);

(g) first aid kit;

(h) fire extinguisher;

(i) appropriate emergency signal devices and/or two way radio; and

(j) flashlight.

D. Prohibitions

1. The construction of new structures other than accessways, walkover structures, and beach facilities, are prohibited in the setback areas established in Section 210.C.4.

2. The use of plastic snow-fencing is prohibited due to the hazards presented to fish, marine mammals, and other wildlife in the aftermath of a storm event.

3. Alterations to beaches adjacent to Type 1 and Type 2 waters are prohibited except where the primary purpose of the project is to preserve or enhance the area as a natural habitat for native plants and wildlife.

Section 210.2
Barrier Islands and Spits

A. Definition

1. Barriers are islands or spits comprised of sand and/or gravel, extending parallel to the coast and separated from the mainland by a coastal pond, tidal water body, or coastal wetland. In addition to a beach, barriers have, in most cases, a frontal foredune zone and often, backbarrier dune fields. The lateral limits of barriers are defined by the area where unconsolidated sand or gravel of the barrier abuts bedrock or glacial sediment. This definition of a barrier system is commonly associated with many geomorphic descriptors. These descriptors include, but are not limited to, barrier islands, bay barriers, and spits. Spits are further described as tombolo, shingle, cuspate, and flying spits. The terms "bar" and "ridge" were once used to describe a barrier system, but have since been replaced with the term "barrier". Many of the state's barriers have been mapped and assigned by the Coastal Resources Management Council to three categories, as listed in Table 4. The barriers or portions thereof designated by the federal government as undeveloped pursuant to their criteria, under the Coastal Barrier Resources Act of 1982 (Public Law 97- 348), are noted in Table 4. In these federally designated areas, flood insurance for most forms of construction is not available.

2. Undeveloped Barriers are essentially free of commercial/industrial buildings, (excluding public utility lines) houses, surfaced roads, and structural shoreline protection facilities.

3. Moderately Developed Barriers are those that are essentially free of houses, commercial/ industrial buildings and/or facilities (excluding utility lines) that contain surfaced roads, recreational structures, and/or structural shoreline protection facilities.

4. Developed barriers contain houses and/or commercial/industrial structures; they may also contain surfaced roads and structural shoreline protection facilities. Maps of designated barriers are available for inspection at the offices of the Coastal Resources Management Council.

B. Findings

1. Rhode Island's South Shore coastal ponds and a frequently low-lying mainland are protected from the forces of the open ocean by a chain of low, narrow barriers. Their importance as buffers against storms, the continuing pressures to build upon them, and a long history of disasters during hurricanes have made the regulation of activities on barrier a primary concern of the Coastal Resources Management Council. Several barriers that had all structures destroyed in 1938 and 1954 are again developed.

2. The flexibility of barriers permits them to withstand the severe forces of erosion to which they are exposed. All ocean-fronting barriers are migrating inland in response to those natural erosion forces and to sea-level rise. The migration process takes the form of "rolling over," whereby sand eroded from the ocean beach is transported by storm-surge overwash water and deposited on the barrier and in the coastal lagoon landward of the barrier. The peat sometimes seen along the ocean shore of barriers is evidence of the past existence of a marsh that once flourished behind an older, more seaward barrier. This same flexibility makes barriers particularly ill-suited to human occupation. Not only do buildings interfere with foredune growth but during major hurricanes debris from shattered structures is swept inland, causing additional destruction on the barrier and on adjacent low-lying mainland areas, increasing property damage, and complicating cleanup efforts. Sixty-five percent of Rhode Island's 27.3 miles of ocean-fronting barriers are undeveloped. The recreational opportunities and uniquely beautiful open space they provide are of growing importance in an increasingly developed region.

3. Within Narragansett Bay there are several small barriers that are also highly susceptible to damage during major storms. With few exceptions, these barriers have not been developed and provide locally important natural areas of great beauty and often considerable recreational value.

C. Policies

1. On barriers classified as undeveloped in Table 4, the Council's goal is to preserve, protect, and where possible, restore these features as conservation areas and as buffers that protect salt

ponds and the mainland from storms and hurricanes.

2. On barriers classified as developed in Table 4, the Council's goal is to ensure that the risks of storm damage and erosion for the people inhabiting these features are minimized, that activities that may reduce the effectiveness of the barrier as a storm buffer are avoided, and that associated wetlands and ponds are protected.

3. On Barriers classified as Moderately developed in Table 4, the following policies shall apply:

a) New development is prohibited on Moderately Developed Barriers except where the primary purpose of the project is restoration, protection or improvement of the feature as a natural habitat for plants and wildlife or as allowed under paragraph (c) of this section;

b) Existing roads, bridges, utilities and shoreline protection facilities may be maintained only, in accordance with the requirements of Section 300.14;

c) Existing recreational structures may be altered, rehabilitated, expanded or developed (as defined in the glossary of the (RICRMP) according to the following standards:

i) Any expansion of or development activities associated with existing recreational structures shall not occur within or extend into any flood zone designated as V on the most current Federal Insurance Rate Maps, or as established by the Federal Emergency Management Agency;

ii) All activity shall be confined to the existing footprint of disturbance; for the purposes of this section, the footprint of disturbance shall be defined as that area encompassed by the perimeter of the structural foundation and/or areas determined by the CRMC to be substantially altered due to associated structures, excluding dunes, wetlands and areas encompassed within pertinent setback and buffer zone requirements of this program;

iii) Any proposed expansion of existing recreational structures shall be limited to an area equal to 25% of the square footage of the ground floor area encompassed by the structural foundation of the existing building as of June 23, 1983; associated structures shall not be used in calculating existing area;

iv) The activity shall meet or exceed all relevant standards for the appropriate flood zone designation;

v) All activities shall be subject to relevant setback and buffer zone requirements of this program, including accessory structures such as decks, porches, walls, boardwalks, swimming pools, roads, driveways, parking lots and other structures integral to or ancillary to the existing recreational structure.

4. Alterations to undeveloped barriers are prohibited except where the primary purpose of the project is protection, maintenance, restoration or improvement of the feature as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature.

5. The Council recognizes the highly dynamic nature of barriers and that storms may cause sudden and significant changes to the geomorphic form of these coastal features. Accordingly, large scale public infrastructure improvements and dense development is inappropriate. Therefore, the construction or expansion of new infrastructure or utilities shall be prohibited on all barriers including water, gas and sewer lines. It is not the intention of these policies to apply to individual, on-site water supply systems or individual sewage disposal systems, or gas lines. The use of plastic snow-fencing on all barriers is prohibited.

6. It is the Council's policy to assure that all construction permitted on developed barriers is undertaken to provide for the greatest physical security of the inhabitants of the barrier and adjoining mainland and to maintain, to as great an extent as possible, the qualities of the adjacent coastal pond and wetlands. (See detailed regulations for construction on dunes and beaches in Section 210.1, flood hazard areas in Section 300.3, and other applicable policies and standards in the Coastal Resources Management Program and special area management plans). The construction of new buildings is prohibited on developed barriers on which only roads, utility lines, and other forms of public infrastructure were present as of 1985.

7. With the exception of boardwalks and snow fencing utilized to trap sand, all residential and non-water-dependent recreational, commercial, and industrial structures on undeveloped barriers physically destroyed 50 percent or more by storm-induced flooding, wave or wind damage may not be reconstructed regardless of the insurance coverage carried.

8. Persons utilizing undeveloped beaches are required to observe the following rules:

(a) Destruction or removal of signs, snow fencing, or other sand-stabilizing devices is prohibited; camping is prohibited unless in vehicles equipped with a self-contained toilet.

(b) Vehicles are permitted only on marked roads or trails and on the beach. Vehicles that drive on the beach and designated unstabilized trails on undeveloped barriers shall abide by the policies found in Section 210.1.

(c) Persons shall be at all times subject to applicable town ordinances and regulations restricting the use of private, state, or federal properties.

9. Existing recreational structures, such as beach pavilions, located on undeveloped and moderately-developed barriers that enhance the public's access to the water and generate tourism revenue for the State of Rhode Island may be permitted to be re-established in the event that they are physically destroyed 50% or more as a result of storm induced flooding, wave, or wind damage, provided that: (a) applicable policies and standards of the RICRMP are met; and, (b) public access to the shore is enhanced. Where possible, the reconstruction of these structures shall be behind the foredune zone as defined in Section 210.1. Any reconstruction of these facilities shall be limited to the square footage of the ground floor area encompassed by the structural foundation of the existing (associated structures shall not be used to calculate this area).

D. Prohibitions

1. The use of plastic snow-fencing is prohibited on all barriers due to the hazards presented to fish, marine mammals, and other wildlife in the aftermath of a storm event.

2. Vehicle access across a back barrier flat to access the Salt Ponds is prohibited. Access to the ponds shall be on foot only.

3. Vehicles are prohibited in vegetated areas anywhere on the barriers.

4. Alterations to undeveloped barriers are prohibited except where the primary purpose of the project is protection, maintenance, restoration or improvement of the feature as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature.

5. The construction or expansion of new infrastructure or utilities shall be prohibited on all barriers including water, gas and sewer lines. It is not the intention of these policies to apply to individual, on-site water supply systems or individual sewage disposal systems, or gas lines.

6. New development is prohibited on moderately developed barriers except where the primary purpose of the project is restoration, protection, or improvement of the feature as a natural habitat for plants and wildlife or as allowed under Section 210.3.C.3 herein. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature.

7. The construction of new buildings is prohibited on developed barriers on which only roads, utility lines, and other forms of public infrastructure were present as of 1985.

Table 4. Undeveloped, Moderately Developed, and Developed Barriers

Undeveloped

Sandy Point Island, Westerly[1]
Napatree Beach, Westerly[1] (west of Watch Hill Beach Club)
Maschaug Beach, Westerly[1]
Quonochontaug Beach, Westerly/Charlestown[1] (west of Breachway)[1]
East Pond Beach, Charlestown
East Beach (Ninigret conservation area to Charlestown Breachway)[1]
Green Hill Beach, South Kingstown[1] (central portion)
Moonstone Beach, South Kingstown
Browning Beach, South Kingstown[1]
Long Pond Beach, Little Compton[1]
Round Pond Beach, Little Compton[1]
Briggs Beach, Little Compton[1]
Ship Pond Cove, Little Compton
Round Meadow Pond, Little Compton
Quicksand Pond Beach, Little Compton[1]
High Hill Marsh Barrier, Little Compton[1] (eastern portion)
Sandy Point/West Beach, New Shoreham[1]
Casey Point, North Kingstown[1]
Greene Point, North Kingstown[1]
Bissel Cove Barrier, North Kingstown
Tibbit's Creek, North Kingstown
Baker's Creek, Warwick
Buttonwood Cove, Warwick
Gaspee Point, Warwick
Conimicut Point, Warwick
Nayatt Point Beach, Barrington
Mussachuk Creek, Barrington
Rumstick Point, Barrington
Hog Island, Portsmouth[1] (2 separate areas)
Musselbed shoals, Portsmouth
Nag Pond/Jenny Pond, Portsmouth[1]
Gull Point, Portsmouth
Sheep Pen Cove, Portsmouth
McCurry Point, Portsmouth
Sapowet Point, Tiverton
Fox Hill Pond, Jamestown

Table 4. (Con't)

Moderately Developed

Napatree Beach, Westerly (easterly portion)
Michel Pond Beach, Charlestown
Garden Pond Beach, Charlestown
Charlestown Beach, Charlestown (east of breachway to developed portion)
Narragansett Beach, Narragansett
Bonnet Shores Beach, Narragansett
Mackerel Cove Beach, Jamestown
Hazards Beach, Newport
Bailey's Beach, Newport
First (Easton's) Beach, Newport (western portion)
Crescent Beach, New Shoreham[1]
Second Beach, Middletown
Third Beach, Middletown
Fogland Point, Tiverton[1]
Tunipus Pond Beach, Little Compton
Watch House Pond Beach, Little Compton[1]
Sakonnet Harbor Beach, Little Compton[1] (eastern portion)

Developed

Atlantic Beach, Westerly
Quonochontaug Beach, Charlestown (east of breachway)
East Beach, Charlestown (west of Ninigret conservation area)
Charlestown Beach, Charlestown
Green Hill Beach, South Kingstown (westerly and easterly portions only)
East Matunuck/Jerusalem Beach, South Kingstown and Narragansett
Roger Wheeler Beach (Sand Hill Cove), Narragansett
Bonnet Shores Beach, Narragansett (easterly portion)
First (Easton's) Beach, Middletown (easterly portion)
Crescent Beach, New Shoreham (southerly portion)
Coast Guard Beach, New Shoreham
High Hill Marsh Barrier, Tiverton (western portion)

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[1] Denotes those barriers or portions thereof where the Coastal Barrier Resources Act of 1982 (CoBRA) prohibits federal subsidies for most new development and federal flood insurance for all new development. For the most up-to-date maps showing CoBRA designations, contact the Division of Planning, Department of Administration.

* **Note**: This list denotes most of the major barriers in Rhode Island. However, there may be some small barrier systems not contained on this list, but are subject to the policies characterized by the barrier's level of development.

Section 210.3. Coastal Wetlands

A. Definitions

1. Coastal wetlands include salt marshes and freshwater or brackish wetlands contiguous to salt marshes or physiographical features. Areas of open water within coastal wetlands are considered a part of the wetland. In addition, coastal wetlands also include freshwater and/or brackish wetlands that are directly associated with non-tidal coastal ponds and freshwater or brackish wetlands that occur on a barrier beach or are separated from tidal waters by a barrier beach.

2. Salt marshes are areas regularly inundated by salt water through either natural or artificial water courses and where one or more of the following species predominate: smooth cordgrass (Spartina alterniflora), salt meadow grass (Spartina patens), spike grass (Distichlis spicata), black rush (Juncus gerardi), saltworts (Salicornia spp.), sea lavender (Limonium carolinianum), saltmarsh bulrush (Scirpus spp.), high tide bush (Iva frutescens).

3. Contiguous freshwater wetlands are those wetlands which border directly on salt marshes or brackish wetlands or physiographical features and which, except for size limitations, meet the definition of bog, marsh, swamp, or pond under the Rhode Island Freshwater Wetlands Act (R.I. General Laws, Section 2-1-18 et seq.). All contiguous freshwater wetlands are protected under this Program, regardless of their size.

4. Contiguous brackish wetlands are those wetlands which border directly on salt marshes and where one or more of the following species predominate: tall reed (Phragmites communis), tall cordgrass (Spartina pectinata), broadleaf cattail (Typha latifolia), narrowleaf cattail (Typha angustifolia), spike rush (eleocharis rostellata), chairmaker's rush (Scirpus americana), creeping bentgrass (Agrostis palustris) sweet grass (Hierochloe odorata), wild rye (elymus virginicus).

5. High salt marsh is defined as that portion of the salt marsh that typically is flooded by spring, moon, or other flooding tides but otherwise is not flooded on a daily basis. The vegetative composition of high salt marsh typically consists of one or more of the following: salt meadow grass (Spartina patens); spike grass (Distichlis spicata); black rush (Juncus gerardi); tall reed (Phragmites communis); Sea Lavender (Limonium carolinianum); tall cordgrass (Spartina pectinata); saltmarsh bulrushes (Scirpus spp.); and high tide bush (Iva frutescens).

6. Low salt marsh is defined as that portion of the salt marsh that is flooded daily. The vegetative composition of the low salt marsh typically consists predominantly of smooth cordgrass (Spartina alterniflora).

7. Alterations to coastal wetlands are defined in §300.12.

B. Findings

1. Coastal wetlands are important for a variety of reasons. They provide food and shelter for large populations of juvenile fish and are nurseries for several species of fish. The mud flats and creeks associated with many coastal wetlands are rich in shellfish, particularly soft-shelled clams. Coastal wetlands also provide important habitat for shore birds and waterfowl, and many are among the most scenic features of the Rhode Island shore. Coastal wetlands are effective in slowing erosion along protected shores.

2. Much of the original acreage of coastal wetlands in Rhode Island has been destroyed, and the pressures to fill coastal wetlands continue. Downtown Providence, much of Quonset, and many other low-lying coastal communities are built on what was once coastal wetland. We do not know how much coastal wetland has been destroyed by development, but some 10 percent of our coastal wetlands of 40 acres or more is reported to have been filled between 1955 and 1964. Since coastal wetlands are found in sheltered waters, they frequently coincide with attractive sites for marinas and waterfront homes. The pressures to fill or otherwise alter coastal wetlands therefore remain. According to a 1975 survey, there are some 3,700 acres of salt marsh in the state, of which some 10 percent were fringe marshes less than five yards wide. Approximately 90 percent of the state's salt marshes abut Type 1 and 2 waters.

3. Most of Rhode Island's wetlands are small and, when viewed in isolation, may appear to be of insignificant value. In order to better understand the value of individual salt marshes, the Council has sponsored research to investigate the feasibility of rating the relative value of individual coastal

wetlands. Two years of research revealed that it is not possible to rate coastal wetlands if all ecological considerations are given equal weight. The study also showed that there is little if any correlation between the perceived scenic coastal wetland and its ecological characteristics.

4. Land uses and activities abutting coastal wetlands may have a strong impact upon the wetland itself. Nearby drainage patterns which affect sedimentation processes and the salinity of waters may easily be altered, with detrimental effects. Wildlife must be protected from harassment. Bulkheading and filling along the inland perimeter of a marsh prevents inland migration of wetland vegetation as sea level rises.

5. In light of continuing pressures to alter coastal wetlands, and in accordance with the Council's policy of "no net loss", avoidance and minimization of impacts and compensation for unavoidable losses, are necessary tools for retaining and restoring Rhode Island's coastal wetlands.

C. Policies

1. The Council's goal is to preserve and, where possible, restore coastal wetlands.

2. To offset past losses in coastal wetlands and unavoidable alterations to surviving coastal wetlands: (a) disturbed wetlands should be restored as directed by the Council or enhanced when possible, and (b) in areas selected on the basis of competent ecological study, the Council will encourage the building of new wetlands.

3. All alterations to salt marshes and contiguous freshwater or brackish wetlands abutting Type 1 waters are prohibited except for minimal alterations required by the construction or repair of an approved structural shoreline protection facility (see Section 300.7). In Type 1 waters, structural shoreline protection may be permitted only when the primary purpose is to enhance the site as a conservation area and/or a natural buffer against storms.

4. Alterations to salt marshes and contiguous freshwater or brackish wetlands abutting Type 2 waters are prohibited except for minor disturbances associated with (a) residential docks and walkways approved pursuant to the standards set forth in Section 300.3, and (b) approved construction or repair of structural shoreline protection facilities.

5. Coastal wetlands designated for preservation adjacent to Type 3, 4, 5, and 6 waters are identified on maps available for inspection at the Council's offices and at the town halls of coastal cities and towns. In these designated wetlands only the alterations described in #4 above may be permitted. Dredging and filling in these designated coastal wetlands are prohibited. The maps of designated coastal wetlands serve to identify individual wetlands; in all cases precise boundaries shall be determined through a field inspection when proposals that could impact these features are being considered. In support of this goal, the Council supports a policy of "no net loss" of coastal wetland acreage and functions as a result of coastal development.

6. Salt marshes adjacent to Type 3,4,5, and 6 waters that are not designated for preservation may be altered if (a) the alteration is made to accommodate a designated priority use for that water area, (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable, and (c) only the minimum alteration necessary to support the priority use is made.

7. All alterations to coastal wetlands shall be carried out in accordance with Section 300.12.

Section 210.4. Coastal Headlands, Bluffs, and Cliffs

A. Definition

Coastal cliffs, and bluffs are elevated land forms on headlands directly abutting coastal waters, a beach, coastal wetland, and rocky shore.

B. Findings

1. Coastal cliffs and bluffs include a wide variety of headland land forms ranging from low bluffs with scarps cut in easily erodible glacial river or lake sediment, or in glacial till, to the dramatic bedrock cliffs of Newport and Narragansett. They are among our most scenic coastal features and are the sites for popular scenic overlooks. More than 300,000 visit Newport's Cliff Walk each year.

2. Exposed bluffs of unconsolidated material, such as those along the Matunuck headland in South Kingstown, have been known to recede by as much as 30 feet in a single severe hurricane. Portions of the Mohegan Bluffs on Block Island have eroded similar distances by undercutting of the toe resulting in bluff collapse in less severe storms. Human activities can greatly increase the susceptibility of headland bluffs to erosion. Structures close to the face of a bluff can make the feature unstable, and concentrated runoff and devegetation can cause a marked acceleration of erosion. Factors that affect the ability of a cliff or bluff to withstand erosion include its composition (rock or soil type), slope, stratigraphy, height, exposure, vegetative cover, and the amount of human disturbance to which it is subjected. Since headland bluffs are composed of unconsolidated glacial sediment, they are more susceptible to erosion than headland cliffs composed of bedrock.

3. Eroding bluffs can be important sources of sediment to nearby beaches. The bluffs of Watch Hill headland in Westerly, for example, were probably an important source of sand to the South Shore barrier and headland beaches. Extensive reveting of this headland certainly had a detrimental effect on these apparently distant and unconnected beaches. Due largely to their inaccessibility to man and other predators, some cliffs and bluffs provide important nesting sites for several species of birds.

C. Policies

1. The Council's goals are to (a) protect coastal cliffs, and bluffs from activities and alterations that may damage the value of these features as sources of sediment to beaches and as a buffer against storm waves and flooding; (b) prevent any construction in contiguous areas that may weaken the feature and has the potential of creating a hazard; and (c) preserve the scenic and ecological values of these features.

2. Due to their well-recognized scenic value and their use as tourist attractions and low-intensity recreation areas, the Council designates the following coastal cliffs and bluffs as Coastal Natural Areas: Bonnet Point, Hazard Rocks, Fort Wetherill, Ocean Drive, the Brenton Cove Cliffs, Cliff Walk, Purgatory Chasm, Sakonnet Point, and Mohegan Bluffs. A Council priority when considering proposed alterations on or adjacent to these features is the preservation and, where possible, the restoration of their scenic qualities.

3. On shorelines adjacent to Type 1 waters, the Council shall prohibit construction on or alteration of coastal cliffs and bluffs and contiguous areas where such construction or alteration has a reasonable probability of causing or accelerating erosion or degrading a generally recognized scenic vista. The Council shall require suitable unaltered buffer zones on cliffs and bluffs where erosion or substrate stability can be affected by facility construction or use.

In determining whether a reasonable probability exists that increased erosion or loss of scenic values will result from the proposed construction or alteration, the Council shall consider the following:

(a) the exposure of the feature to the erosional forces of tidal currents, storm waves and storm-surge flooding, wind and surface runoff, and other such natural processes;

(b) the composition of the feature involved as well as its slope, stratigraphy, height, exposure, and vegetative cover;

(c) existing types and levels of use and alteration;

(d) competent geological evidence to evaluate whether natural erosion of the feature in question is a significant source of sediments to nearby

headland and barrier beaches and whether the proposed construction of alteration will substantially reduce that source of sediment; and

(e) inclusion of the feature on an accepted inventory of significant scenic or natural areas or evidence of public use and enjoyment as a scenic or natural area.

4. The Council shall encourage the use of non-structural methods to diminish frontal erosion associated with coastal cliffs and bluffs adjacent to Type 1 and Type 2 waters.

5. Construction or alterations to coastal cliff and bluffs contiguous to Type 2, 3, 4, 5 and 6 waters may be permitted if (a) the construction is undertaken to accommodate a designated priority use for the abutting water area, (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable, and (c) only the minimum alteration necessary to support the designated priority use is made. In considering applications for permits for erosion-control measures, the Council shall weigh the impact of the proposed structure on the supply of sediments to nearby beaches. Where the Council finds that a substantial reduction or elimination of sediment is likely to result, and that natural erosional processes affecting the nearby beach will thereby be accelerated, it shall deny an application for Assent.

Section 210.5. Rocky Shores

A. Definition

Rocky shores include naturally occurring shorelines composed of bedrock ledge or boulder-strewn areas, extending from below mean low water to above the mean high water mark. These areas frequently contain tide pools.

B. Findings

1. Rocky shores play an important role in storm damage prevention and provide habitat to specially adapted assemblages of organisms. Gently sloping terraces of bedrock and boulders dissipate wave energy and are effective buffers that protect the mainland from storm damage. Rocky shores harbor a diversity of specially adapted plants and animals that can withstand both wave action and occasional desiccation. Tide pools are particularly beautiful features that should be protected.

2. Many rocky shores, especially in the lower Bay, are well recognized for their scenic value. Beavertail Point in Jamestown and sections of Ocean drive in Newport are notable examples. Rocky shores are often important tourist attractions, and are used for surf casting and skin diving by increasing numbers of people.

C. Policies

1. The Council's goal is to preserve and protect these features for their role in erosion prevention, for the unique assemblages of organisms that they may support, and for their recreation and scenic value.

2. The alteration of rocky shores abutting Type 1 water areas, excepting approved projects for shoreline protection, is prohibited.

3. On shorelines adjacent to Type 1 and 2 waters, the Council shall prohibit construction on or alteration of rocky shores and contiguous areas where such construction or alteration has a reasonable probability of causing or accelerating erosion or degrading a generally recognized scenic vista.

In determining whether a reasonable probability exists that increased erosion or loss of scenic value will result from the proposed construction or alteration, the Council shall consider the following: (a) the exposure of the feature to the erosional forces of tidal currents, storm waves and flooding, wind and surface runoff, and other such natural processes; (b) the composition of the feature involved and any significant plant or animal communities present; (c) existing types and levels of use and alteration; and (d) inclusion of the feature on an accepted inventory of significant scenic or natural areas or evidence of general public use and enjoyment as a scenic or natural area.

4. The construction of alterations to rocky shores adjacent to Type 3, 4, 5, and 6 waters may be permitted if (a) the construction is undertaken to accommodate a designated priority use for the abutting water area, (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable, and (c) only the minimum alteration necessary to support the designated priority use is made.

Section 210.6
Manmade Shorelines

A. Definition

Manmade shorelines are those characterized by concentrations of shoreline protection structures and other alterations, to the extent that natural shoreline features are no longer dominant. They most commonly abut Type 3, 5, and 6 waters. The presence of isolated seawalls, bulkheads, and similar structures does not constitute a manmade shoreline, as the term is used in this Program.

B. Findings

1. A 1978 survey of the Narragansett Bay shoreline revealed that along 25 percent of the shore natural features have been sheathed by manmade structures. Many of these have been built since the 1954 hurricane as attempts at "erosion prevention," undertaken at great cost by private property owners. Many will not survive a major hurricane that strikes the coast from the south. Many structures are overbuilt for the control of minor erosion between major storms.

2. Manmade shorelines usually have a major impact on the appearance of the shore, interfere with public access to and along the coast, and may alter erosion-accretion processes on neighboring beaches.

C. Policies

1. The Council's goals are (a) to encourage the maintenance of structures that effectively mitigate erosion and/or sustain landforms adjacent to the water, and (b) prevent the accumulation of debris along the shore where such structures are ineffective or no longer in active use.

2. The Council encourages proper maintenance of existing shoreline protection structures (see Section 300.7).

3. The Council shall endeavor to determine the ownership of abandoned and deteriorating shoreline protection structures and shall encourage the owners of such structures to restore or remove them. The Council may order restoration or removal where it finds that the structure poses a hazard to navigation, interferes with the public's right of access to and along the shore, causes flooding or wave damage to abutting properties, or degrades the scenic qualities of the area.

Section 210.7
Dunes

A. Definitions

1. Dunes are elevated accumulations of sand formed by wind action. Dunes which are undisturbed appear as hills, mounds, or ridges of sand and are typically vegetated with beach grass and shrubs. The more or less continuous ridge of dunes parallel to, and just inland of the beach is termed the 'foredune zone'.

For management purposes the seaward limit of the foredune zone is defined as: (1) the furthest seaward point where a noticeable sustained increase in topographic slope begins, or (2) the furthest seaward extent of rooted vegetation in the immediate area, or (3) fifteen (15) feet seaward of the dune crest, whichever is further seaward. The inland edge of the foredune zone is defined as twenty-five feet (25) landward of the dune crest. It is from the inland edge of the foredune zone that all setbacks are applied.

B. Findings

1. The foredune zone, like beaches, is a dynamic feature. While beaches are shaped by the forces of waves, the foredune is created and shaped primarily by the wind. The foredune zone dissipates energy from waves and storm-surge overwash. This results in a decreased wave runup and lowered levels of overwash water. Thus the foredune zone serves as buffer to help minimize property loss. As reservoirs of sand, the foredune zone provides some sediment to severely eroding beaches. The height and stability of foredunes is enhanced by the growth of beach grass which traps and anchors windblown sand. Although resistant to salt air and desiccation, beach grass is easily killed by human foot traffic. The shape or form of the foredune zone is of paramount importance. The seaward-facing slope of the foredune (termed the dune ramp) naturally forms at the same gradient as the seaward slope of the berm (usually 5-10 degrees). This low-gradient surface serves to dissipate and absorb wave energy. Higher-gradient slopes on human-altered foredunes often do not absorb the wave energy; the non-absorbed waves erode the foredune and are reflected seaward, transporting sand offshore.

2. Human-altered foredunes constructed of sand-sized material able to be moved by the wind will move and grow similar to natural foredunes.

3. Human-altered forms constructed in the foredune area of gravel-sized material not moveable by the wind, are not dunes, but are defined as dikes. Dikes are often placed along the shoreline by property owners in the hope that they will function as foredunes. However, dikes should not be confused with a true foredune because their response to geologic processes is quite different.

4. In order to protect the ecological and geological integrity of the foredune zone and enhance its ability to serve as a buffer during moderate and severe storm events all residential construction should be setback not less than 30 times the annual erosion rate and all commercial construction should be set back not less than 60 times the annual erosion rate as previously established in Section 140 of this program. Larger setbacks may be required based on an assessment of the site conditions and other concerns relative to the proposed project. However, in no case should the dune setback be less than 50 feet. Setbacks help protect property from damage and destruction during severe storm events. All dune setbacks should be measured from the inland edge of the dune or dike. Access ways may be allowed over the dunes in order to facilitate pedestrian access to the beach.

5. Individual Sewage Disposal Systems have the potential to become buoyant or be damaged during a severe storm event causing raw sewage to spill onto the beach. Therefore, no new Individual Sewage Disposal Systems should be constructed within the setback area. Repairs should, whenever possible, be located outside of the setback area.

C. Policies

1. The Council's goals are to: (a) protect the foredune zone from activities that have a potential to increase wind or wave erosion; (b) to prevent construction in high hazard areas and protect the public from dangerous storm forces; (c) to enhance the ability of dunes to serve as a natural storm buffer; and, (d) to protect the scenic and ecologic value of the foredune zone and dunes.

2. All residential construction shall be setback not less than 30 times the annual erosion rate and commercial construction shall be setback not less than 60 times the annual erosion rate. In no case shall the setbacks be less than 50 feet. All setbacks shall be measured from the landward edge of the

foredune zone defined to be 25 feet landward of the dune crest. A special exception shall be required for relief from the setback requirements from dunes and beaches unless the activity proposed is a beach facility or access way (either lateral or perpendicular) in which case a variance from the setback provisions shall be required. No new Individual Sewage Disposal Systems shall be constructed within the setback area from the dune or seaward of construction lines (see Section 300.6.A.2 for definition of new ISDS). Access ways may be permitted through the dunes in order to gain access to the beach.

3. Alteration of the foredune zone adjacent to Type 1 and 2 waters is prohibited except where the primary purpose of the project is non-structural protection, restoration, nourishment, or improvement of the feature as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature. The Council may also permit the establishment of accessways (e.g., dune walkover structures) on foredunes provided that all requirements of this section are met.

4. Alteration of the foredune adjacent to Type 3, 4, 5, and 6 waters may be permitted if (a) the alteration is undertaken to accommodate a designated priority use for the abutting water area; (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable; (c) only the minimum alteration necessary to support the designated priority use is made; (d) there is no change in the usage of the property; (e) there is no change in the footprint of existing structures; and, (f) the construction will meet all current and applicable policies, standards, and requirements of the RICRMP.

5. The construction of dune walkover structures may be permitted in order to limit pedestrian traffic and disturbance of the foredune zone. The width of dune walkover structures shall be limited to four (4) feet. In some instances, public walkover structures may include small decks and viewing platforms provided that the square footage of the viewing platforms will be limited to 100 square feet.

D. Prohibitions

1. Vehicles are prohibited on dunes and within 75 feet of the dune crest except on trails marked expressly for vehicular use. Prohibited areas may or may not be vegetated.

2. Alteration of the foredune zone adjacent to Type 1 and 2 waters is prohibited except where the primary purpose of the project is non-structural protection, restoration, nourishment, or improvement of the feature as a natural habitat for native plants and wildlife. In no case shall structural shoreline protection facilities be used to preserve or enhance these areas as a natural habitat or to protect the shoreline feature.

Section 220. Areas of Historic and Archaeological Significance

A. Definition

Historic and archaeological resources include districts, sites, buildings, structures, objects, and landscapes included in or eligible for inclusion in the state and national registers of historic places, or areas designated as historically or archaeologically sensitive according to the predictive model developed by the Rhode Island Historical Preservation Commission.

B. Findings

1. The Rhode Island coastal region has a rich and long history, and possesses many well-preserved examples of prehistoric and historic sites. The coastal zone contains an abundant and diverse number of native American Indian settlements, some dating back at least 3,000 years. The bulk of the information still to be obtained concerning Rhode Island's prehistory is associated with sites in the coastal zone. The Historical Preservation Commission has developed a predictive model that identifies those coastal sites where significant archaeological finds are most likely to be present.

2. Beginning with the first Europeans under Giovanni da Verrazano, who visited the site of Newport in the early 1500s, the coastal zone has been the location of important historic and architectural development. The Rhode Island coastal region is nationally recognized for its outstanding historic architecture, and the majority of all the sites and districts currently on the state and national registers of historic places are located in the coastal zone. Significant historic and archaeological sites are extremely valuable cultural, educational, economic, and recreational resources to the state's citizens and visitors alike, and they are part of the essential character of the coastal zone. Historic properties are a key element in defining the state's quality of life, and hence its attractiveness to a growing tourist industry and as a location for new investment. Historic sites and districts provide access to and enjoyment of scenic coastal areas, both in terms of the sites themselves and in the traditional land-use patterns which define many scenic qualities in the coastal zone.

3. Historic and archaeological resources in the coastal zone are under great pressure from a variety of forces which threaten their outright destruction or the degradation of their historic qualities and setting. Unsympathetic new development, erosion, artifact collectors, and rising sea levels are major factors in reducing the number and quality of these irreplaceable resources.

C. Policies

1. The Council's goal is to, where possible, preserve and protect significant historic and archaeological properties in the coastal zone.

2. Preservation of significant historic and archaeological properties is a high priority use of the coastal region. Activities which damage or destroy important properties shall be considered a low priority.

3. The Council shall require modification of, or shall prohibit proposed actions subject to, its jurisdiction where it finds a reasonable probability of adverse impacts on properties listed in the National Register of Historic Places. Adverse impacts are those which can reasonably be expected to diminish or destroy those qualities of the property which make it eligible for the National Register of Historic Places. The Council shall solicit the recommendations of the Historical Preservation Commission regarding impacts on such properties.

4. Prior to permitting actions subject to its jurisdiction on or adjacent to properties eligible for inclusion (but not actually listed in the National Register of Historic Places), and/or areas designated as historically or archaeologically sensitive by the Historical Preservation Commission as the result of their predictive model, the Council shall solicit the recommendations of the Commission regarding possible adverse impacts on these properties. The Council may, based on the Commission's recommendations and other evidence before it, including other priority uses of this Program, require modification of or may prohibit the proposed action where such adverse impacts are likely.

5. Structural shoreline protection facilities may be permitted in Type 1 Waters provided that the structure is necessary to protect a structure which is currently listed in the National Register of Historic Places.

Part Three.

Activities under Council Jurisdiction

Section 300. In Tidal and Coastal Pond Waters, on Shoreline Features and Their Contiguous Areas

Section 300.1 Category B Requirements

All persons applying for a Category B Assent are required to:

(1) demonstrate the need for the proposed activity or alteration;

(2) demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met;

(3) describe the boundaries of the coastal waters and land area that are anticipated to be affected;

(4) demonstrate that the alteration or activity will not result in significant impacts on erosion and/or deposition processes along the shore and in tidal waters.

(5) demonstrate that the alteration or activity will not result in significant impacts on the abundance and diversity of plant and animal life.

(6) demonstrate that the alteration will not unreasonably interfere with, impair, or significantly impact existing public access to, or use of, tidal waters and/or the shore;

(7) demonstrate that the alteration will not result in significant impacts to water circulation, flushing, turbidity, and sedimentation;

(8) demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;

(9) demonstrate that the alteration or activity will not result in significant impacts to areas of historic and archaeological significance;

(10) demonstrate that the alteration or activity will not result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and;

(11) demonstrate that measures have been taken to minimize any adverse scenic impact (see Section 330).

Each topic shall be addressed in writing.

Additional requirements are listed for specific Category B activities and alterations in the sections that follow.

Section 300.2. Filling, Removing, or Grading of Shoreline Features

A. Definitions

1. Filling is the deposition of materials of upland origin onto shoreline features or their contiguous areas (see Section 300.9 for inland disposal of dredged materials).

2. Removing is the process of taking away, including excavation, blasting, or mining, any portion of a shoreline or its contiguous area.

3. Grading is the process whereby fill or the soils of a shoreline or its contiguous area are redistributed or leveled.

Established agricultural practices in areas contiguous to shoreline features are excluded from this section.

Filling, removing, or grading activities shall be reviewed at the Category B level when (a) the filling or removing involves more than 2,000 cubic yards of material, (b) the affected area is greater than one acre, or (c) the affected area is a designated historic area or archaeologically sensitive site.

B. Prohibitions

1. Filling, removing, or grading is prohibited on beaches, dunes, undeveloped barrier beaches, coastal wetlands, cliffs and banks, and rocky shores adjacent to Type 1 and 2 waters unless the primary purpose of the alteration is to preserve or enhance the feature as a conservation area or natural buffer against storms.

2. Filling, removing, or grading on coastal wetlands is prohibited adjacent to Type 1 and 2 waters, and in coastal wetlands designated for preservation adjacent to Type 3, 4, 5 and 6 waters, unless a consequence of an approved mosquito-control ditching project (Section 300.12).

3. On-site beach materials (cobbles, sand, etc.) may not be used as construction material.

4. Mining is prohibited on coastal features.

C. Standards

1. The following standards apply in all cases where filling, removal, or grading is undertaken:

(a) Fill slopes shall have a maximum grade of 30 percent.

(b) All excess excavated materials, excess fill, excess construction materials, and debris shall be removed from the site and shall not be disposed in tidal waters or on a coastal feature.

(c) Disturbed uplands adjacent to a construction site shall be graded and re-vegetated or otherwise stabilized to prevent erosion during or immediately after construction.

(d) Removal or placement of sediments along jetties or groins may be permitted only as part of an approved dredging or beach nourishment project (see Section 300.9).

(e) All fill shall be clean and free of materials which may cause pollution of tidal waters.

(f) Cutting into rather than filling out over a coastal bank is the preferred method of changing upland slopes.

2. The following upland and shoreline earthwork standards shall be required in those cases where the Council determines that additional measures are warranted in order to protect the environment of the coastal region. Such requirements shall be listed on Assents as stipulations.

(a) For Earthwork on shoreline features:

(1) Prior to initiation of construction, the contractor shall meet on-site with the CRMC staff to discuss and clarify the conditions of the permit.

(2) A re-vegetation plan shall be submitted for review and approval when construction is undertaken on a barrier beach. This plan shall describe plant material, methods of planting, time of planting, soil amendments, and maintenance.

(3) Construction materials and excavated soils shall not be placed or stored on any

shoreline feature excepting developed barrier beaches and manmade shorelines.

(4) All disturbed soils shall be graded smooth to a maximum 3:1 slope and re-vegetated immediately after construction, or temporarily stabilized with mulch, jute matting, or similar means until seasonal conditions permit such re-vegetation.

(5) In sensitive areas, work shall be carried out from areas above slope from coastal features. Machinery shall normally not be allowed to operate on a coastal wetland. For unavoidable work on a coastal wetland, a protective cover shall be deployed to minimize disturbance.

(6) In instances where the CRMC permits temporary disturbance of a coastal feature, shoreline slope, buffer zone, or area of beach grass, the disturbed area shall be completely restored by the owner under the guidance of CRMC staff.

(7) Concrete structures which will come in contact with salt water shall be constructed with concrete which utilizes a Type II or Type V air-entraining Portland cement or an equivalent that is resistant to sulfate attacks of seawater.

(b) For upland earthwork, measures shall be taken to minimize erosion:

(1) A line of staked hay bales or other erosion-preventing devices (including diversion ditches, check dams, holding ponds, filter barrier fabric, jute or straw mulch) shall be placed at the downslope perimeter of the proposed area of construction prior to any grading, filling, construction, or other earthwork. Hay bales shall be toed in to a depth of 3 to 4 inches, and maintained by replacing bales where necessary until permanent re-vegetation of the site is completed. No soils or other materials should pass beyond the bale line.

(2) All slopes shall be returned to the original grade unless otherwise specified.

(3) Where natural or manmade slopes are or have become susceptible to erosion, the slopes shall be graded to a suitable slope and re-vegetated with a thick rooting brush vegetation. Mulch shall be applied as necessary to provide protection against erosion until the vegetation is established.

(4) Construction shall be timed to accommodate stream and/or runoff flow and not allow flows over exposed, un-stabilized soils, or into or through the excavation. Flows shall not be restricted in such a manner that flooding or inhibition or normal flushing occurs.

(5) Any pumping of groundwater which may be necessary for de-watering shall be discharged into sediment traps consisting of a minimum of staked hay bale rings enclosing crushed stone or trap rock of a size sufficient to disperse inflow velocity. Hay bales shall be recessed 4 to 6 inches into the soil and maintained.

(6) There shall be no discharge of sediment-laden waters into storm drains. Storm drains shall be surrounded by staked hay bales to intercept sediment.

(c) For any disturbance of steep slopes (over 15 percent):

(1) Where such construction is allowed, the following shall be observed: (1) no fill shall be allowed on the slope; (2) excavation shall be kept to an absolute minimum; and (3) vegetative cover on the slope shall be permanently maintained to the maximum extent physically possible.

(2) Where the potential for damage to a slope exists from runoff, staked hay bales, berms, or similar diversions shall be placed at the top and toe of the slope. Collected water shall be suitably discharged through properly constructed drains or swales. Wherever possible, drainage swales shall be constructed along and adjacent to property lines so as to avoid drainage onto adjacent properties. Swales shall be capable of handling runoff from a 10-year-rainfall occurrence.

(3) For excavations on slopes or directly adjacent to coastal features, the excavated materials shall be cast upslope of the trench or excavation so as to minimize downslope runoff of sediment.

(4) Pedestrian access over steep shoreline slopes and banks shall be in the form of field stone or similar stabilized paths or elevated stairs. Access over bluffs shall be with elevated stairs only.

Section 300.3. Residential, Commercial, Industrial, and Recreational Structures

A. Definitions

1. Residential buildings include houses, and other structures as defined as a building in Section R-115 of the Council of American Building Officials (CABO) Building Code, and the pertinent sections thereto which are used primarily for human habitation which are built on a shoreline feature or its contiguous area.

2. Commercial and industrial structures and operations on a shoreline feature, its contiguous area, or within tidal waters include all buildings and alterations to such features related to the manufacturing and interchange of goods or commodities, or any other business activity.

3. Recreational structures include pavilions, decks, and other structures constructed for recreational purposes on a shoreline feature, its contiguous area, or in tidal waters.

4. Associated residential structures including but not limited to decks, porches, walls, boardwalks, swimming pools, roads, driveways, and shall include other structures integral to or ancillary to a residential building including minor grading, filling or excavation typically 10 cubic yards or less.

B. Policies

1. It shall be the policy of the Council to undertake all appropriate actions to prevent, minimize or mitigate the risks of storm damage to property and coastal resources, endangerment of lives and the public burden of post-storm disaster assistance consistent with policies of the State of Rhode Island as contained in the Hazard Mitigation Plan element of the State Guide Plan when considering applications for the construction of residential, commercial, industrial and recreational structures, including utilities such as gas, water and sewer lines, in high hazard areas.

C. Prerequisites

1. Applicants proposing new construction and/or alterations to existing structures shall obtain a letter from the local authorities certifying that proposed activities conform to the local zoning ordinance, or that if relief from an ordinance is required that it has been obtained and that the decision authorizing the appropriate relief is final.

This letter must be submitted to the CRMC with the application.

2. Applicants proposing new construction and/or alterations to existing structures shall demonstrate that all applicable requirements of the RISBC including those pertaining to construction within flood hazard zones will be met.

This demonstration shall be made by submitting to the CRMC at the time of application a building official's form properly completed and signed by the local building official.

3. Applicants proposing to build, repair or alter an individual sewage disposal system (ISDS) shall obtain a permit from the Department of Environmental Management and shall submit to the CRMC copies of the approved application and the approved plans. The plan submitted must bear a DEM/ISDS approval stamp.

4. Persons proposing activities that may impact the function of an existing ISDS and which by the rules and regulations of the Department of Environmental Management requires the issuance of a permit, shall obtain the necessary permits and submit copies of these permits to the CRMC at the time of application.

5. Applicants for industrial, commercial and recreational structures shall demonstrate that all state safety codes, fire codes, and environmental requirements have or will be met.

6. Applicants shall demonstrate that connections to public water supplies and sewer systems shall be authorized by the appropriate authorities when:

a) such connections are proposed by the applicant;

b) where on-site water withdrawal and/or sewage disposal will have a significant adverse environmental or public health impact.

7. Applicants for commercial, industrial, and recreational structures shall demonstrate that adequate transportation and utility services to support the proposed operations and related activities are available.

D. Prohibitions

1. Industrial operations and structures are prohibited in Type 1 and 2 waters or on shoreline features abutting these waters.

2. The mining and extraction of minerals, including sand and gravel, from tidal waters and salt ponds is prohibited. This prohibition does not apply to dredging for navigation purposes, channel maintenance, habitat restoration, or beach replenishment.

3. Solid waste disposal and minerals extraction is prohibited on shoreline features and their contiguous areas.

4. The use of fill for structural support of buildings in flood hazard V zones is prohibited.

5. See Section 110 (specifically Table 1A) for a listing of additional prohibitions.

E. Standards

1. General:

(a) See standards given in "Filling, Removing, or Grading of Shoreline Features" (Section 300.2), as applicable.

(b) See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

(c) Commercial and Industrial docks, wharves and piers shall be designed and certified by a registered professional engineer.

2. Residential, commercial, industrial, and recreational buildings:

(a) Excavation and grading shall be restricted to those activities and areas necessary for the construction of the building and/or appurtenant structures (see Section 300.2).

(b) Applicants shall be required to reduce the inflow of pollutants carried by surface runoff in accordance with the policies and standards contained in Section 300.6 and as detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual.*

F. Flood Zone Construction

In many instances lands under the jurisdiction of the CRMC are by virtue of their topographic position subject to flooding. The Federal Emergency Management Agency has evaluated the risk of flooding and has established 100 year return frequency elevations of the flood waters (i.e. the Base Flood Elevation, (BFE) for all of the State's coastal communities. The approximate limits of the flood zones and the associated Base Flood Elevations are shown on the FEMA's Flood Insurance Rate Maps, which are commonly available at each communities building official's office.

In recognition that structures located within Flood Hazard Zones must be designed to meet more severe conditions than those not, the Rhode Island State Building Code, (RISBC) contains specific requirements for flood zone construction. (Reference RISBC-8)

The CRMC requires all applicants proposing construction within flood hazard zones to demonstrate that all applicable portions of the RISBC and more specifically RISBC-8 are to be met.

This demonstration shall be made by submitting to the CRMC at the time of application a building official's form properly completed and signed by the local building official.

G. Guidelines for Construction in Flood Hazard Zones

In addition to the requirements of the RISBC, the CRMC suggests that applicants incorporate the following items into their proposed designs:

1. For construction in wave velocity (V) zones as defined by Federal Flood Insurance Rate Maps:

(a) If timber pilings are used, they should meet the American Society for Testing and Materials (ASTM) standards for Class B piles and shall have a minimum tip diameter of 8 inches. Wooden pilings should be treated with a wood preservative. Bracing between piles is recommended.

(b) Pilings in ocean fronting areas should penetrate no less than 10 feet below mean sea level.

(c) Floor joists should be secured with hurricane clips where each joist encounters a floor beam. These metal fasteners or straps should be nailed on the joist as well as on the beam.

(d) To secure the exterior wall to the floor joists, galvanized metal strap connections should be used connecting the exterior wall studs to the joists.

(e) Roof trusses or rafters should be connected to the exterior wall with galvanized metal straps.

2. For construction in coastal stillwater (A) Flood Zones.

(a) Items a, b, c, d, e as listed for V zone construction should, if applicable, be employed.

(b) Parallel concrete walls or pilings rather than fill should be used to elevate habitable residential structures when six (6) feet or more clearance exists between the existing grade and the flood plain elevation.

In areas subject to minimal wave action in a 100-year storm event, discontinuous reinforced-concrete foundation walls which allow sufficient free flow of flood waters may be substituted for parallel concrete walls or pilings.

Section 300.4. Recreational Boating Facilities

A. Definitions

Recreational boating facilities include marinas, launching ramps, residential boating facilities, recreational wharves, piers and slips, floats or floating docks, and recreational mooring areas.

1. Marina: any dock, pier, wharf, float, floating business, or combination of such facilities that service five or more recreational boats as a commercial enterprise or in association with a club.

2. Launching ramp: a manmade or natural facility used for the launching and retrieval of boats.

3. Residential boating facility: a dock, pier, wharf, or float, or combination of such facilities, contiguous to a private residence, condominium, cooperative or other home owners association properties that may accommodate up to four (4) boats.

4. Recreational mooring area: any designated area managed by a commercial enterprise, a club, city, or town where five or more recreational craft are kept at moorings.

B. Policies

1. The Council encourages marinas to utilize techniques that make the most efficient use of space and increased demands for moorage, dockage, and storage space by considering dry stack storage, innovative slip and mooring configurations, and the like.

2. In order to limit the cumulative impacts of many individual residential boating facilities, the Council encourages the construction of facilities that service a number of users. It is the policy of the Council to manage the siting and construction of recreational boating facilities within the public tidal waters of the state to prevent congestion, and with due regard for the capability of coastal areas to support boating, and the degree of compatibility with other uses and ecological considerations. The Council shall require that a residential structure be contiguous to any shoreline site for a proposed residential boating facility.

3. The Council recognizes that the United States Coast Guard has primary authority over navigational aids and marine boating safety, and that these responsibilities are complemented by the Department of Environmental Management, local harbormasters, and public boating service organizations such as the Coast Guard Auxiliary.

4. The Council requires municipalities preparing to implement harbor management rules, regulations and/or programs relating to activities and structures in tidal waters to apply for a determination of consistency with the Coastal Resources Management Program to assure conformance between such rules, regulations and/or programs and the Coastal Resources Management Program, the Guidelines for the Development of Municipal Harbor Management Plans and the General Laws of the State of Rhode Island (see Section 300.15).

5. All persons proposing condominium, dockominium, or other forms of ownership or operation of recreational boating facilities involving multiple, cooperative, condominium or fee simple interests in ownership or operation shall submit a prospectus of such proposals to the CRMC for review of consistency with the state of Rhode Island's public trust responsibilities, Chapter 46-23 of the General Laws of Rhode Island, and the Rhode Island Coastal Resources Management Program.

6. Repair or reconstruction of all structures that are physically destroyed 50% or more by wind, storm surge, waves or other coastal processes shall require a new Council Assent. Such activities requiring a new Council Assent shall be reviewed according to the most current applicable programmatic requirements of the Coastal Resources Management Program, its Special Area Management Plans, and/or any other appropriate CRMC-approved management plan.

7. All residential boating facilities are required to be registered by and with the Council and have posted on them a registration plate and number issued by the Council. Applicants for residential boating facilities are referred to the Council's Dock Registration Program for additional detailed standards of this policy and program.

8. The Council shall require persons proposing to construct new marina facilities or proposing to significantly expand existing marina facilities to undertake measures that mitigate the adverse impacts to water quality associated with the proposed activity.

9. All recreational boating facilities shall be designed and constructed to adequately withstand appropriate environmental conditions present at the site.

10. All recreational boating facilities shall be designed and constructed in a manner which does not impede or detract from and whenever practicable promotes public access along and to the shore.

11. The construction of marinas, docks, piers, floats and other recreational boating facilities located on tidal lands or waters constitutes a use of Rhode Island's public trust resources. Due to the CRMC's legislative mandate to manage Rhode Island's public trust resources for this and subsequent generations, the Council must assess all proposed uses of public trust lands or waters on a case by case basis, examine reasonable alternatives to the proposed activity, and ensure that public's interests in the public trust resources are protected. In assessing a proposed recreational boating facility, the Council shall evaluate the following: a) the appropriateness of the structure given the activities potential to impact Rhode Island's coastal resources; b) the appropriateness of the structure given geologic site conditions; c) the potential impacts of the structure and use of the structure on public trust resources (e.g., fin fish, shellfish, submerged aquatic vegetation, etc.); d) the potential navigation impacts of the structure and associated use of the structure; e) the potential aesthetic and scenic impacts associated with the structure; and f) the cumulative impacts associated with the increased density of existing recreational boating facilities in the vicinity of the proposed project. In considering these factors, the Council shall weigh the benefits of the proposed activity against its potential impacts while ensuring that it does not cause an adverse impact on other existing uses of Rhode Island's public trust resources.

C. Prerequisites

1. Persons proposing to establish a new marina will be required to concurrently obtain a permit from the Army Corps of Engineers.

2. Persons proposing to establish a recreational mooring area are required to concurrently obtain a permit from the Army Corps of Engineers.

3. An application for a Council Assent for a marina and/or mooring area will include a map prepared and stamped by a professional engineer, land surveyor, or architect that designates the area of tidal water that will be incorporated within the marina.

4. (a) All applications for recreational boating facilities shall be initially reviewed by the Executive Director or his designee. The Executive Director may refer any such application to the Council for a hearing if based upon the application on its face a determination is made that the proposed activity warrants a Council hearing.

(b) All such applications not referred to the Council for hearing under a) above shall be referred to the subcommittee on recreational boating facilities which shall consist of at least three (3) Council members appointed by the Chairman. The Chairman shall also appoint a Chairman of the subcommittee.

(c) The subcommittee on recreational boating facilities shall, based upon the application and staff reports, make a determination that the application meets all the criteria as set out in Section 300.4.E.3 above and any other applicable Council policy or procedures. If a determination is made that all the above criteria are met within thirty (30) days of the submission of the file by the staff to the subcommittee chairman that the file is complete, the application shall be processed as a Category A application.

(d) If a determination is made by the subcommittee that all of the above criteria are not met then the subcommittee shall refer the matter to staff as a Category B application.

(e) The subcommittee shall have the authority to consider and act upon variance requests to certain standards of this section pertaining to residential boating facilities. The subcommittee shall utilize the criteria and requirements of Section 120 of this program in its evaluation of variance requests. Variances may be granted by the subcommittee to the standards listed in subsection (f) below only; variance requests to other standards of this section, or to other appropriate and relevant sections of the CRMP must be made to the full Council. Variances shall not be considered by the subcommittee if there is a substantive objection, in accordance with Section 130, to the application.

(f) Variances may be granted to all of the standards contained in Section 300.4.E.3 and Section 200.2.C.3 provided engineering,

biological and other appropriate concerns have been addressed except for the following: i) the subcommittee may not grant a variance to Section 300.4.E.3.j; ii) the subcommittee may only grant a variance to within 18 inches of the marsh grade standard (Section 300.4.E.3.f) provided engineering, biological, and other appropriate concerns are met; and iii) the subcommittee may only grant a variance for the extension of a recreational boating facility out to 75 feet beyond MLW or up to a 50% increase beyond the 50 foot standard (Section 300.4.E.3.k) provided engineering, biological, and other appropriate concerns are met.

D. Prohibitions

1. The building of new marinas in Type 1 and 2 waters is prohibited.

2. The building of new residential docks, piers, and wharfs in Type 1 waters is prohibited. This prohibition shall not apply to structures previously assented by the Rhode Island Department of Harbors and Rivers, the Army Corps of Engineers, or the CRMC. Additionally, in those instances where an applicant can not produce a previous assent but can demonstrate by clear and convincing evidence that a residential dock in Type 1 Waters pre-existed the formation of the Council, the Council may grant a Temporary Dock Permit issued in accordance with the CRMC's Dock Registration Program, which permit shall expire at the end of the useful life of the structure, or ten (10) years, whichever occurs first, and at which time said structure must then be removed.

Any assent granted pursuant to this section shall be recorded in the land evidence records and is transferable to a subsequent owner or purchaser of the subject property, provided however, that all assent conditions are adhered to and the dock is removed at the termination of assent.

3. The unloading of catches by commercial fishing vessels at residential boating facilities is prohibited.

4. The building of structures that are integral to or ancillary to a residential boating facility, including but not limited to gazebos, boat lifts, launching ramps, boat houses, and storage sheds is prohibited. However, the construction of boat lifts and launching ramps may be allowed in Type 3, 5, and 6 waters.

5. The discharge of sanitary wastes into tidal waters from devices other than those approved by the United States Coast Guard is prohibited.

E. Standards

1. For marinas:

(a) Sufficient sanitary facilities shall be provided to service the patrons of the marina.

(b) Sufficient parking shall be provided for the patrons of the marina. A standard of 300 square feet is required for each parking space; the minimum requirements for the total number of parking spaces provided is one space for each 1.5 boats and one space for each 1.2 employees.

(c) Discharge of sanitary wastes to tidal waters from boats using the facility by devices other than those approved by the United States Coast Guard is prohibited.

(d) A Council Assent for a marina permits the marina operator to undertake minor repairs and alterations of approved facilities without further review, where such repairs or activities will not alter the assented design, capacity, purpose or use of the marina. For the purposes of this section, the assented design, capacity, purpose or use of the marina shall be those characteristics associated with the physical configuration or construction, numbers of vessels accommodated at in-water facilities, and nature of operation as defined in the original Council Assent, respectively. Minor repairs and alterations to in-water facilities shall include repair or replacement of dock decking or planks, replacing pilings, extensions of slips and/or finger piers within the perimeter and capacity of the marina as defined within the original Assent, or as established in paragraph (f) of this section, and other activities of a similar and non-substantial nature. Minor repairs and alterations to upland facilities may take place upon Council approval of an operations and maintenance plan as identified below at (k) and shall include grading of parking and launch ramp areas, grouting of seawalls, plumbing and electricial work, maintenance of sidewalks, fences, and walkways, flagpole installations, landscaping, signage; and other activities of a similar and non-substantial nature. Minor repairs and alterations shall not be construed to include maintenance dredging, alterations, repairs or

expansion of shoreline protection facilities, bulkheads, or breakwaters or other activities subject to review under other relevant sections of this program. All minor repairs and alterations shall take place within the assented design of the marina, or marina perimeter as defined in the original Council Assent or as established in accordance with paragraph (f) of this section.

(e) In those instances where the minor repair or alteration would require the use of heavy machinery (such as a pile driver or grader), the Council shall be notified in writing at least 10 working days prior to undertaking the work. Notice of repair activities requiring the use of heavy machinery shall include the following:

i) A statement that the notice is given pursuant to Section 300.4.E.1.e;

ii) A description of the proposed repair or alteration to be performed including a statement as to the size and type of materials to be used;

iii) A copy of the original Council Assent or Division of Harbors and Rivers permit under which the proposed repair or alteration is to be performed;

iv) A copy of the site plan from the original Council Assent showing the location of the proposed repair or alteration;

v) The name of the person on-site responsible for supervising the proposed repair or alteration;

vi) The anticipated dates on which the proposed repair or alteration shall commence and be completed.

(f) All marinas and/or mooring areas shall have a defined perimeter for in-water facilities, which shall describe and limit that area in which the repair or alteration activities described in paragraphs (d), (e) & (g) may take place. In cases where the boundaries of the water area have not been designated, the Council shall define the water area (perimeter) within which alterations and repair activities may take place, prior to the commencement of any such activities. Operators of marinas may apply to the Council for definition and establishment of this perimeter at any time. Perimeters shall be defined on the basis of in-water facilities in place as of September 30, 1971, or subsequently assented structures.

(g) Proposals for the alteration or reconfiguration of in-water facilities such as piers and/or mooring areas shall be reviewed in the following manner:

i) Alterations to the layout or configuration of in-water facilities which do not increase the number of boats accommodated shall obtain a Certification of Maintenance in accordance with the requirements of Section 300.14;

ii) Alterations which propose to increase the number of boats that may be accommodated at the in-water facilities of the marina within 25% of the capacity of the marina as defined in the original Council Assent, and do not propose to extend the facility beyond the defined perimeters (established pursuant to the original Council Assent or paragraph (f)) shall be reviewed as Category A applications. The Council's review shall establish that the alterations and/or expansion meet the 25% standard, and that the Council's standards for parking and sanitary facilities are met.

iii) Alterations which propose to increase the numbers of vessels accommodated at the in-water facilities beyond 25% of the capacity as defined in the original Council Assent, and/or extend the facility beyond the defined perimeters, or alter the purpose of the facility shall be reviewed as a Category B application.

(h) Any alterations to mooring areas shall be consistent with any CRMC approved municipal harbor management rules, regulations or programs, as defined in Section 300.15 of this program.

(i) All new marina facilities shall be required to install a marine pumpout facility. Any expansion or alteration of an existing marina facility that results in greater than or equal to 50 new slips shall be required to install a marine pumpout facility. Any expansion or alteration of an existing marina facility which proposes to increase the number of vessels accommodated at the in-water facilities beyond 25% of the capacity as defined in the original Council Assent shall be required to undertake mitigative measures. If 25% of the capacity as defined in

the original Council Assent is greater than or equal to 50 slips, then a marine pumpout facility shall be required. If 25% of the capacity as defined in the original Council Assent is less than 50 slips, then the Council shall require either the installation of a marine pumpout facility or other suitable mitigation measures.

If the applicant can demonstrate that there are already enough marine pumpout facilities to serve all of the recreational boating facilities found in the region, then the Council may waive the requirement for a marine pumpout facility and require alternative mitigative measures.

All marine pumpout facilities shall be designed in a manner that serves the boating public. In addition, all marine pumpout facilities that are required by the Council to mitigate the adverse impacts to water quality associated with recreational boating shall be open for the general public's use. However, marina operators may charge a fair and nondiscriminatory fee to cover the cost of constructing and operating these facilities.

(j) All new marina facilities shall meet the setback policies and standards contained in municipal harbor management plans and/or harbor ordinances approved by the Council. However, in all cases marina facilities shall be setback at least 50 feet from approved mooring fields and three times the authorized project depth from federal navigation projects (e.g. navigation channels and anchorage areas).

(k) All new marinas and significant expansions of marinas and/or mooring areas shall have an approved operations and maintenance program for upland facilities, prepared in accordance with the most recent edition of the *Environmental Guide for Marinas: Controlling Nonpoint Source and Stormwater Pollution in Rhode Island.*

2. For launching ramps:

(a) Ramps shall be constructed at an angle no greater than 15 percent from the horizontal. Where upland modification is necessary, the slope will be created, where possible, by cutting back into the upland, rather than by placing fill on a shoreline feature. Ramps shall be approximately even with beach grade.

(b) Ramps shall extend a sufficient distance inland to prevent washout at the inland edge and shall extend a minimum of 3 feet beyond extreme low water. Single-lane ramp width shall not be less than 15 feet.

(c) Where a form of pavement is necessary in areas of unconsolidated sediment, ramps will be constructed using 6 inch by 6 inch or equivalent by a maximum of 15 feet reinforced concrete ties, connected with galvanized steel rods placed perpendicular to the slope of the ramp, and packed within the underlain by 6 inches of crushed stone. Concrete ties shall utilize an air-entraining, Type II or Type V Portland cement, or an equivalent sulfate-resistant substitute.

(d) Side slopes of the ramp (above water line) shall be constructed of sloped riprap or, if the slope permits, vegetated.

(e) See Section 300.2, "Filling, Removing, or Grading of Shoreline Features," and Section 300.7, "Construction of Shoreline Protection Facilities."

3. For residential docks, piers, and floats:

(a) Applications for all residential recreational boating facilities shall indicate all work associated with access to these structures; a bottom survey showing water-depth contour lines and sediment types along the length of the proposed structure shall also be provided and certified by a registered professional engineer. All pathways, boardwalks, and cutting or filling of coastal features shall be specified. All such work shall be in accordance with applicable standards for "Filling, Removing, or Grading" (Section 300.2) and "Residential, Commercial, Industrial, and Public Recreational Structures" (Section 300.3).

(b) Fixed structures which are for pedestrian access only shall be capable of supporting 40 pounds per square foot live load as well as their own dead weight; floating structures shall be capable of supporting a uniform 20 pounds per square foot live load, or a concentrated load of 400 pounds. A written certification by the designer that the structure is designed to support the above design loads shall be included with the application.

(c) No creosote shall be applied to any portion of the structure.

(d) A dock, floating dock or pier width shall be a maximum of 4 feet; terminal float size shall not exceed 150 square feet per recreational boating facility.

(e) Flotation devices shall be securely contained.

(f) Where possible, piers shall span coastal wetlands; when pilings are placed within coastal wetlands, only the immediate area of piling penetration may be disturbed. The stringers shall be located at least 3 1/2 feet above the grade of the coastal wetland. Construction in a coastal wetland shall be accomplished by working out from completed sections. No construction equipment shall traverse the wetland while the facility is being built.

(g) Owners are required to maintain their facilities in good working condition. Facilities may not be abandoned. The owner shall remove from tidal waters and coastal features any structure or portions of structures which are destroyed in any natural or man-induced manner.

(h) Float ramps and other marine appurtenances or equipment shall not be stored on a coastal wetland, shoreline embankment, or in any area designated as a buffer zone.

(i) The use of cribs for structural support shall be avoided. The use of cribs as support in tidal waters may be permitted given certain environmental design considerations, however, in these instances the size and square footage shall be minimized and the structure can not pose a hazard to navigation. When cribs are permitted for structural support, they must be removed when the useful life of the structure has ceased (e.g. the structure is no longer used as a means of accessing tidal waters).

(j) Residential boating facilities shall not intrude into the area within 25 feet of an extension of abutting property lines unless (1) it is to be common structure for two or more adjoining owners, concurrently applying or (2) a letter or letters of no objection from the affected owner or owners are forwarded to the CRMC with the application.

(k) Residential boating facilities shall not extend beyond that point which is (1) 25 percent of the distance to the opposite shore (measured from mean low water), or (2) 50 feet seaward of mean low water, whichever is the lesser.

(l) All residential docks, piers, and floats shall meet the setback policies and standards contained in municipal harbor management plans and/or harbor ordinances approved by the Council. However, in all cases residential docks, piers, and floats shall be setback at least 50 feet from approved mooring fields and three times the U.S. Army Corps or Engineer's authorized project depth from federal navigation projects (e.g. navigation channels and anchorage areas).

(m) No sewage, refuse, or waste of any kind may be discharged from the facility or from any vessel utilizing it.

(n) A Council Assent for a residential boating facility permits the owner to undertake minor repairs of approved facilities without further review, where such repairs will not alter the assented and/or permitted design, capacity, purpose or use of the facility. For the purposes of this section, minor repairs shall include the repair or replacement of dock decking or planks, hand railings and support, and other activities of a similar and non-substantial nature. Minor repairs do not include alterations to the approved design of the facility, expansion of the facility, or work requiring the use of heavy machinery (such as a pile driver); these activities require that a Certification of Maintenance be obtained from the Council in accordance with Section 300.14. Residential boating facilities shall be in continuous and uninterrupted use to meet this standard, in accordance with permit conditions.

(o) Materials used for the construction of residential boating facilities shall be limited to timber. This requirement does not apply to float restraint piles or ramps used in the construction of floating docks. This requirement also does not pertain to timber connection hardware. Alternate materials may be utilized in the construction of floating docks.

(p) The surface of the dock, pier and float shall be designed in a manner which provides safe traction and allows for the appropriate drainage of water.

(q) Geologic site conditions shall exist which are appropriate for structural support.

Section 300.5. Mooring and Anchoring of Houseboats and Floating Businesses

A. Definitions

1. Houseboat; a building constructed on a raft, barge, or hull that is used primarily for single- or multiple-family habitation; if used for transportation this use is secondary.

2. Floating business; a building constructed on a raft or hull that is represented as a place of business, including but not limited to waterborne hotels, restaurants, marinas or marina-related businesses.

B. Policies

1. The Council considers that placement of houseboats and floating businesses in tidal waters is a low-priority use of any coastal water body and is acceptable only in limited numbers and in specific areas. Houseboats and floating businesses are not classified as water-dependent, since it is not their primary purpose to serve as a means of on-water transportation or recreation.

2. When in transit, a houseboat or floating business is considered a boat or vessel and must meet all applicable state and Coast Guard standards and regulations.

C. Prohibitions

1. Houseboats and floating businesses are prohibited from berthing or mooring in coastal ponds (in accordance with G.L.R.I., 46-22-91) and in all Type 1 and 2 waters.

2. Houseboats are prohibited from mooring or anchoring in all other tidal waters of the state unless within the boundaries of a marina.

3. Floating businesses are prohibited from mooring or anchoring in the tidal waters of the state unless within the boundaries of a marina or a port.

4. Discharge of sanitary sewage to tidal waters from houseboats or floating businesses using marina or port facilities by devices other than approved by the Coast Guard is prohibited.

D. Additional Category B Requirements

1. Applicants for floating businesses shall (a) demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity; (b) demonstrate that there will be no significant conflict with such water-dependent uses and activities as recreational boating, fishing, navigation, commerce, and aesthetic enjoyment of the waterfront; and (c) demonstrate that there will be no significant conflict with riparian rights or harbor lines.

E. Standards

1. Applicants for either houseboats or floating businesses shall meet all pertinent standards given in "Recreational Boating Facilities" (Section 300.4) under standards for residential docks, piers, and floats.

2. Houseboats and floating businesses shall tie into marina or port holding-tank pumpout facilities where available.

Section 300.6. Treatment of Sewage and Stormwater

A. Definitions

1. Sewage: The Council has adopted the definition of sewage set forth under Title 46, Chapter 12, Section 1 or the General Laws, to wit: "... any human or animal excremental liquid or substance, any decomposed animal or vegetable matter, garbage, offal, filth, waste, chemicals, acid, dyestuff, starch, coloring matter, oil and tar, radioactive substances and any compound solution, mixture or product thereof, and every substance which may be injurious to public health or comfort, or which would injuriously affect the natural and healthy propagation, growth or development of any fish or shellfish in the waters of this state, or of the nourishment of the same, or which would injuriously affect the flavor, taste, or value of food of any such fish or shellfish or which would defile said waters or injure or defile any vessel, boat, wharf, pier, or any public or private property upon, in or under said waters or any shore thereof."

For purposes of the Coastal Resources Management Program, "sewage" is further defined to include freshwater discharges including runoff that may significantly alter the salinity of tidal waters or salt ponds. The term "sewage" also includes discharges of heated waters.

2. Individual sewage disposal system (ISDS): any arrangement for sanitary sewage disposal by means other than discharge into a public sewer system.

3. Point source discharges: any conveyance including, but not limited to, any pipe, ditch, channel, tunnel, conduit, container, transport vehicle or vessel from which sewage is or may be discharged.

4. Sewage treatment plants: sewage collection and treatment facilities, including state, municipal, or privately owned and operated collection, pumping, treating, disposal or dispersion facilities designed for the treatment of sewage from residences, commercial buildings, industrial plants and institutions, together with any groundwater, surface water, or surface runoff that may be present in the waste stream.

5. Stormwater runoff: that portion of precipitation that does not naturally infiltrate into the landscape (e.g., without human influence) but rather travels overland as surface flow. It is also commonly referred to as "stormwater". Stormwater runoff can be a significant contributor of pollutants including sediments, bacteria, nutrients (e.g., nitrogen and phosphorus), hydrocarbons (e.g., oil and grease), metals, and other substances which can adversely affect water quality and the coastal environment. In addition, significant discharges of stormwater may alter salinity and thereby adversely impact the coastal environment, especially in poorly flushed estuaries and embayments.

6. Stormwater management plan: A stormwater management plan is a description of the proposed best management practices, detailed site plans, and written narrative that, when implemented, provides protection and restoration of receiving waters by reducing pollutant loadings and other negative impacts associated with changes in land use (i.e., urbanization).

7. Large Projects: For the purposes of the stormwater management requirements contained in this section, large projects are defined as any one of the following: subdivision of six (6) units or more; any structure serviced by an on-site sewage disposal system serving 2000 gallons or more per day; any activity which results in the creation of one (1) acre or more of parking facilities, roadways, or impervious surfaces; all new roads, highways, and bridges; all improvement projects to roads, highways, and bridges (excluded from these requirements are projects consisting only of pavement resurfacing, minor roadway repairs, or emergency roadway and drainage repairs); any activity which is subject to the RIPDES general permit requirements for construction activities or industrial activities; any activity subject to Section 300.8; any activity subject to Section 300.13; and any activity subject to Section 320.

8. Small Projects: For the purposes of the stormwater management requirements contained in this section, small projects are defined as all new development and redevelopment or modification of existing commercial and industrial structures, or residential subdivisions of 5 units or less. In addition, activities which are classified as maintenance, and projects which receive a finding of no significant impact (FONSI) are excluded from these requirements.

B. Policies

1. It is the Council's policy to maintain and, where possible, improve the quality of groundwater and tidal and salt pond surface waters.

2. It is the Council's policy to minimize the amount of ISDS-derived nitrates and other potential contaminants which may leach into salt ponds and all other Type 1, 2, and 3 waters.

3. Applicants for Assents for ISDS' are encouraged to meet on site with CRMC staff prior to undertaking of ISDS groundwater and soil tests to discuss the location of the system and buffer zones.

4. It is the Council's policy to require the proper management and treatment of stormwater through the preparation and implementation of a stormwater management plan which satisfies the requirements of the RICRMP. All activities which meet the definition of a large project must prepare and implement a stormwater management plan which satisfies the requirements of Section 300.6.E.2.. All activities which meet the definition of small project must satisfy the stormwater management standards contained in Section 300.6.E.3.

5. The most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual* provides the appropriate methods for the preparation of stormwater management plans and the treatment of stormwater with "Best Management Practices" (BMP) within the CRMC's jurisdiction. However, applicants are encouraged to consult other appropriate guidance and technical stormwater design manuals such as Schueler (1987) and Schueler (1992). The Council also recognizes that the most recent version of the *Rhode Island Soil and Erosion and Sediment Control Handbook*, and its amendments, published jointly by the Rhode Island Department of Environmental Management and the United States Department of Agriculture (USDA), Soil Conservation Service (SCS) provides additional guidance and supplemental information with respect to the management and treatment of stormwater.

6. After construction has been completed and the site has been permanently stabilized, the average annual total suspended solid loadings (TSS) shall be reduced by 80 percent. In addition, to the maximum extent practicable, the post development peak runoff rate and the average volume from 2-year, 25-year, and 100-year storm events shall be maintained at pre-development levels unless: i) the applicant has obtained local or state approval which certifies that the existing storm drain system has the capacity to accommodate the additional stormwater runoff; or ii) the stormwater runoff is conveyed, preferably without hardened channels, non-erosive to tidal waters.

7. All stormwater management plans required by the Council should clearly describe the Best Management Practices (BMP) as found in Rhode Island's Stormwater Design and Installation Standards Manual that will be used to treat and mitigate adverse environmental impacts associated with stormwater runoff. In addition, all stormwater management plans shall take into consideration all potential impacts associated with the discharge of stormwater runoff into the coastal environment. Potential impacts include, but are not limited to, the following: (i) impacts to coastal wetlands such as changes in species composition due to the introduction of freshwater to high marsh areas; (ii) changes in the salinity of receiving waters; (iii) thermal impacts to receiving waters; (iv) effects of introducing stormwater runoff to receiving waters that has low dissolved oxygen concentrations; and (v) other potential water quality impacts.

8. All sites should be planned, designed, and developed in order to: (1) Protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss; (2) limit increases of impervious surface areas, except where necessary; (3) limit land disturbance activities such as clearing and grading and cut and fill to reduce erosion and sediment loss; and (4) limit disturbance of natural drainage features and vegetation.

C. Prerequisites

1. Applicants for Council Assents to construct, alter, or extend individual sewage disposal systems or point source discharges shall first obtain a permit from the Department of Environmental Management.

2. All federal water pollution control requirements established by the Federal Water Pollution Control Act (Clean Water Act), as

amended, or established by the federal government or by any state or local government pursuant to such act, are the water pollution control requirements of the Rhode Island Coastal Resources Management Program. Accordingly, all discharge standards, effluent limitations and/or pretreatment standards established pursuant to the Clean Water Act for discharges of pollutants to the waters of Rhode Island under the Rhode Island Pollutant Discharge Elimination System (RIPDES) shall be met (Rhode Island is an EPA delegated state with respect to the NPDES program). In addition, applicants shall obtain an Underground Injection Control (UIC) permit from the Rhode Island Department of Environmental Management when applicable. Applicants subject to RIPDES general permit requirements for construction activities and industrial activities shall apply to the Council prior to submitting an application to the RIDEM.

3. The Council shall formally review proposed actions only after all other applicable state/local requirements have or will be met. However, the Council will comment on preliminary plans for major facilities to assist in the planning process.

D. Prohibitions

1. Point source discharges of sewage and/or stormwater runoff are prohibited on unconsolidated coastal banks and bluffs.

2. New and enlarged stormwater discharges to the high salt marsh environment bordering Type 1 and Type 2 waters and within salt marshes designated for preservation which border Type 3,4,5, and 6 waters are prohibited. Stormwater discharges to existing well flushed tidal channels within high marshes shall not be subject to this prohibition. However, all such discharges shall meet the standards contained in Section 300.6.E.2.

E. Standards

1. For individual sewage disposal systems (ISDS):

(a) See standards given in "Filling, Removing, or Grading" (Section 300.2).

(b) Grading around the ISDS shall direct the flow of surface runoff water away from the ISDS.

(c) Subdrains constructed to lower groundwater levels in an area where an ISDS shall be built shall (1) have a minimum pipe diameter of 6 inches, (2) have no piping located between the anticipated ISDS and the shore, (3) be constructed so as to prevent clogging by soil fines, and (4) have outfalls suitably protected against shoreline erosion and scour.

(d) When existing buildings are changed from seasonal to year-round use, or expanded by adding one or more rooms, certification shall be obtained from the Department of Environmental Management's ISDS Office that the existing ISDS is capable of treating sewage effluent adequately.

(e) Connections to ISDS' and cesspools that are abandoned shall be removed, blocked, or otherwise disconnected, and abandoned cesspools and septic tanks shall be pumped dry and filled with clean fill.

(f) Where necessary, barriers shall be constructed to prevent vehicles from passing over septic systems.

2. Stormwater Management for Large Projects

(a) All stormwater management plans shall be consistent with the Best Management Practices (BMP) and the stormwater design and performance standards found in the *Rhode Island Stormwater Design and Installation Standards Manual.* In addition, all stormwater management plans shall take into consideration all potential impacts associated with the discharge of stormwater runoff into the coastal environment. Potential impacts include, but are not limited to, the following: (i) impacts to coastal wetlands such as changes in species composition due to the introduction of freshwater to high marsh areas; (ii) changes in the salinity of receiving waters; (iii) thermal impacts to receiving waters; (iv) effects of introducing stormwater runoff to receiving waters that has low dissolved oxygen concentrations; and (v) other potential water quality impacts.

(b) After construction has been completed and the site is permanently stabilized, the average annual total suspended solid loadings (TSS) shall be reduced by 80 percent. In addition, to the maximum extent practicable, the post development peak runoff rate and the average volume from 2-year, 25-year, and 100-year

storm events shall be maintained at pre-development levels unless: i) the applicant has obtained local or state approval which certifies that the existing storm drain system has the capacity to accommodate the additional discharge of stormwater runoff; or ii) the stormwater runoff is conveyed, preferably without using hardened channels, non-erosive to tidal waters.

(c) The discharge from any stormwater facility must be conveyed through properly constructed watercourses to provide for non-erosive flows during all storm events. The proposed stormwater conveyance system consisting of open channels, pipes, etc. shall, at a minimum, accommodate the runoff associated with a 10-year storm event or greater if required by other local, state, or federal regulations. These stormwater conveyance systems shall provide for non-erosive flows to receiving waters.

(d) All stormwater detention basins shall be constructed to safely withstand or pass through the discharge from the 100-year runoff flows from the contributing drainage area. Specifically, detention basins shall be constructed to "withstand" the 100-year runoff flows and shall be capable of controlling these flows without failure or damage to the basin and/or detaining berms. Certification by the design engineer as to meeting this requirement shall be provided on the design plans for the proposal.

(e) New or enlarged stormwater discharges to salt marshes and well flushed tidal channels within high marshes shall only be permitted when the applicant can clearly demonstrate that no reasonable alternatives exist (e.g., no other discharge locations having a gravity flow outlet are available and impervious surfaces have been kept to an absolute minimum) and when no adverse impacts to the salt marsh environment will result. In these instances, the applicant shall, at a minimum, meet all applicable standards contained in the *Rhode Island Stormwater Design and Installation Standards Manual.* This standard does not apply to low salt marsh environments with an average width along the property of less than 35 feet.

(f) If the Council determines that any proposed stormwater discharge will result in an unacceptable discharge of pollutants to the waters of Rhode Island, the Council shall require the applicant to mitigate the pollutant loads to acceptable levels. Frequently, this can be accomplished using appropriate Best Management Practices in series in order to achieve higher pollutant removal efficiencies.

(g) Whenever possible, existing natural vegetation shall be left intact along natural drainage easements so as to minimize bank erosion.

(h) No connections to storm, surface, or subsurface drains shall be made to either a individual building sanitary sewer or individual (on-site) sewage disposal system (ISDS), nor shall any such drains be constructed within 25 feet of an existing ISDS.

(i) Wet ponds must have a permanent pool volume equal to the water quality volume calculated by multiplying one-inch by the impervious surface area.

(j) Extended detention dry ponds must detain the water quality volume over a 36-hour period (brim draw-down time).

(k) Infiltration methods must be designed to retain and exfiltrate the water quality volume over a maximum 72-hour period.

(l) During the preparation of the stormwater management plan, the applicant shall: 1) protect areas that provide important water quality benefits and/or are particularly susceptible to erosion and sediment loss; 2) limit increases of impervious surface areas, except where necessary; 3) limit land disturbing activities to reduce erosion and sediment loss; and 4) limit disturbances of natural drainage features and vegetation.

(m) All stormwater management plans shall have a maintenance plan which satisfies the recommended maintenance procedures outlined in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual.*

3. Stormwater Management for Small Projects

(a) After construction has been completed and the site is permanently stabilized, the average annual TSS loadings must be reduced by 80 percent. New construction or modifications to single-family dwellings are exempt, except when new impervious driveway surfaces (e.g., asphalt

or concrete) are proposed. In such cases, adequate treatment of the first 0.5 inches of runoff from the new impervious driveway surface must be provided for in accordance with Section 300.6.E.3(h).

(b) To the maximum extent practicable, the post development peak runoff rate and average volume shall be maintained at levels similar to pre-development levels.

(c) In order to reduce the inflow of pollutants carried by surface water runoff, all activities or alterations shall be required to minimize and/or mitigate any significant adverse impacts associated with surface runoff from the project. All applicants must provide appropriate measures to this end such as the use of infiltration devices, permeable surfaces, and the use of overland flow.

(d) Concentrated runoff shall be minimized to the maximum extent practicable. The use of sheet flow through vegetated areas shall be employed whenever practicable to prevent erosive flows. In addition, roof top runoff shall be directed away from erosion prone areas.

(e) Whenever possible, existing natural vegetation shall be left intact along natural drainage easements so as to minimize bank erosion.

(f) At a minimum, all drainage structures shall be designed to adequately convey the runoff from a ten-year storm event. In the event that a muni-cipality in which the structure is located specifies a greater than 10-year storm event as a minimum design standard, then such greater design standard shall apply. The design of the drainage structure shall consider all impacts on adjacent properties and mitigate any adverse impacts.

(g) No connections to storm, surface, or subsurface drains shall be made to either a individual building sanitary sewer or individual (on-site) sewage disposal system (ISDS), nor shall any such drains be constructed within 25 feet of an existing ISDS.

(h) When applicable, the design and installation standards contained in Section 300.6.E.2 shall be met and the management of stormwater from small projects shall be consistent with the BMPs and the design and installation standards contained in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual.*

4. For catch basins:

(a) Catch basins shall be employed when necessary to reduce runoff-induced infiltration of particulates into water bodies.

(b) A maintenance and cleaning program for catch basins shall be detailed.

(c) Catch basins shall have a minimum sump depth of 3 feet.

(d) Wherever possible, catch basins with permeable sides and/or bottoms shall be used so as to minimize outflow.

5. For outfalls:

(a) Work on outfalls, drainage channels, etc., shall proceed from the shoreline toward the upland in order that no unfinished or un-stabilized lower channel portions be subjected to erosion-producing velocities from upstream. If this cannot be accomplished, all flow shall be diverted from the unfinished areas until stabilization is completed.

(b) Where possible, outfall pipe slopes shall be designed for an exit velocity of less than 5 feet per second.

(c) Screens or grates shall be placed over the end of large outfalls to trap debris.

(d) Beaches or other coastal features in front of outfalls shall be returned to original grade.

(e) Riprap placed on beaches shall not increase the grade of the beach higher than one foot in order to maintain lateral access below mean high water.

(f) Riprap shall be compact, hard, durable, angular stone, with an approximate unit weight of 165 lbs./cubic foot.

(g) Riprap shall be placed with an adequate bedding of crushed rock or other suitable filtering material.

Section 300.7. Construction of Shoreline Protection Facilities

A. Definitions

1. Structural shoreline protection facilities include revetments, bulkheads, seawalls, groins, breakwaters, jetties, and other structures, the purpose or effect of which is to control the erosion of coastal features.

2. A revetment is a structure built to armor a sloping shoreline face usually composed of one or more layers of stone or concrete riprap. A revetment blankets, and generally conforms to, the contours or a coastal feature.

3. A bulkhead is a wood, steel, or concrete structure built to retain or prevent mass wasting and collapse of a bluff into the sea; it provides limited protection from damage by waves.

4. A seawall is a massive, stand alone structure built of placed or dumped stone, concrete, or steel sheetpile. Concrete seawalls often have curved, or stepped face designed to withstand the direct onslaught of ocean waves.

5. A groin is a structure built of rock, steel, timber, or concrete that extends across a beach into tidal waters and is used to entrap sand in the longshore transport system; groins are generally perpendicular to the shoreline's coastal trend.

6. Breakwaters, either exposed or submerged, usually are structures that protect a shore, harbor, anchorage, or basin by intercepting waves. Sometimes breakwaters are placed parallel to the open shoreline to retard the force of incoming waves to headland and barrier beaches.

7. Jetties are structures, usually of dumped stone in Rhode Island (rubble mound), that retard the migration of a tidal inlet (breachway) in order to provide safer passage for boats in and out of coastal lagoons and estuaries.

8. Riprap consists of stone or concrete blocks that are dumped or placed and installed without mortar.

B. Policies

1. The Council favors non-structural methods for controlling erosion such as stabilization with vegetation and beach nourishment.

2. Riprap revetments are preferred to vertical steel, timber, or concrete seawalls and bulkheads except in ports and marinas. All of these forms of structural shoreline protection are considered to be permanent, not temporary structures.

3. When structural shoreline protection is proposed, the Council shall require that the owner exhaust all reasonable and practical alternatives including, but not limited to, the relocation of the structure and nonstructural shoreline protection methods (see Section 300.7.E.1).

C. Prerequisites

1. Permits for projects with structural shoreline protection facilities located below mean high water must be obtained concurrently from the Army Corps of Engineers and the CRMC. Council and Army Corps requirements are designed to complement one another; applicants should consider the requirements of both agencies when beginning the permit process. In some cases, the Council may require an applicant to obtain applicable Army Corps of Engineers permits prior to applying to the Council. A CRMC Assent is not valid unless the applicant has received all required Army Corps of Engineers approvals.

D. Prohibitions

1. The Council shall prohibit new structural shoreline protection methods on barriers classified as undeveloped, moderately developed, and developed and in Type 1 waters.

2. The Council shall prohibit the use of limited applications of riprap to protect septic systems and structures ancillary to the primary structure.

E. Additional Category B Requirements

1. Applicants for structural shoreline protection measures to control erosion shall, on the basis of sound professional information, demonstrate in writing all of the following:

(a) an erosion hazard exists due to natural erosion processes and the proposed structure has a reasonable probability of controlling this erosion problem;

(b) nonstructural shoreline protection has not worked in the past or will not work in the future because these methods are not suitable for the present site conditions;

(c) there are no practical or reasonable alternatives to the proposed activity such as the relocation of structures that mitigate the need for structural shoreline protection;

(d) the proposed structure is not likely to increase erosion in adjacent areas;

(e) the proposed structure is an appropriate solution to the erosion problem considering such things as the long term erosion rate in the area, the likely effects of storms and hurricanes, and the stability of the shoreline on either side of the project;

(f) describe the long-term maintenance program for the facility including financial commitments to pay for said maintenance; and,

(g) new breakwaters, jetties, bulkheads, revetments, and seawalls shall be designed and certified by a registered professional engineer.

2. Applicants for breakwaters and jetties in addition to (a) and (b) above shall demonstrate that the proposed structure is necessary to provide protection to a marina, port facility, public mooring area, or public beach area.

3. Applicants for breakwaters and jetties shall also provide an evaluation of the structure's potential for interrupting the longshore movements of sediment. If such an interruption is likely to be significant, the applicant shall design a sand bypass system or another measure that will assure that the effects on sediment transport shall not cause significant erosion along nearby shores.

4. Repair or reconstruction of all structures that are physically destroyed 50% or more by wind, storm surge, waves or other coastal processes shall require a new Council Assent.

F. Standards

1. All applicable standards for earthwork (Section 300.2) shall be met. The base of the seawall, bulkhead, or revetment must be located as close as practicable to the shoreline feature it is designed to protect; structural shoreline protection facilities shall be placed landward of coastal wetlands.

2. The ends of shoreline protection structures shall be tied into adjacent structures. Where there are no adjacent structures, the new structure shall gradually return to the slope of the feature and be so designed that opportunities for erosion around the back of the structure are minimized.

3. The base of all shoreline protection structures built on unconsolidated sediments shall extend to a depth equivalent to mean low water or to an appropriate depth as determined by the methods detailed in the most recent version of the U.S. Army Corps of Engineers *Shore Protection Manual*. Where practicable, the base shall extend to a depth of 3 feet below the area of disturbance.

4. To promote good drainage behind seawalls and bulkheads, and to minimize the flow of sediment into waterways and avoid the loss of backfill, all backfill must contain less than 10% silt. If sediment in the area is fine-grained, a filtering layer shall be placed behind and/or beneath the structure, consisting of suitably graded stone or rock chips or geotextile filter fabric. Weep holes shall be provided for drainage in retaining walls and bulkheads. The use of grout or concrete within, behind, or over revetments is not permitted.

5. Where feasible, the areas in back of the structure shall be level for a distance equivalent to the height of the structure.

6. The slope of revetments shall not exceed 1:1.

7. Riprap revetments shall be constructed of angular stone with a minimum unit weight of 165 lbs./cubic foot (such as granite). The size of stone shall be dependent upon the site's exposure to wave energy in accordance with the following guidelines:

Fetch (nautical miles)	Weight (lbs.)	Size (cubic yards)
1	400	1/10
2	1,000	1/4
3	2,500	½
4	5,000	1
5 & greater	8,000 & greater	2 & greater

The above assumes a 1:1 wall slope and one layer of placed stone. Equivalent designs using appropriate siting and design methods as described in the most recent version of the U.S. Army Corps of Engineers *Shore Protection Manual* may be substituted in place of the above design guidelines.

8. Applications for structural shoreline protection facilities shall be designed and stamped by a registered professional engineer. However, small revetments in low wave energy environments may be exempted from these design requirements at the discretion of the Executive Director.

9. Concrete used for wall construction along the shore and in tidal waters shall be resistant to the sulfate attack of seawater; Type 2 or Type 5 air-entraining Portland cement or an equivalent shall be used.

10. All construction activities shall minimize any adverse impact to water quality such as disturbance of sediment.

G. Maintenance and Repair

1. To the maximum extent practical there shall be no farther seaward expansion of structural shoreline protection facilities as a result of repair or maintenance activities.

2. Maintenance and repair of existing structural shoreline protection facilities shall be the minimum that is required to maintain the functional viability or structural integrity. In the case of riprap revetments, the addition of limited quantities of riprap armor stone to existing damaged revetments may be allowed as a maintenance activity provided that no impact to coastal resources or lateral access results. All maintenance shall be in accordance with the policies and standards of the Coastal Resources Management Program.

3. All maintenance and repair activities shall minimize any adverse impact to water quality such as disturbance of sediments.

4. All applicable standards for earthwork (Section 300.2.) shall be met for repair or maintenance activities.

5. Maintenance and repair activities do not normally require plans and designs to be certified by a registered professional engineer. However, at the Council's discretion applicants for maintenance or repair activities may be required to submit plans certified by a registered professional engineer. In some cases the Executive Director may waive this requirement if the application is for a minor project.

Section 300.8. Energy-Related Activities and Structures

A. Definitions

1. Energy-related activities include all operations and structures involved in power generation and petroleum processing, transfer, and storage on a shoreline feature or its contiguous area or within tidal waters.

B. Prerequisites

1. Applicants must demonstrate that all relevant local zoning ordinances, building codes, flood hazard standards, and all state safety codes, fire codes, and environmental requirements have or will be met.

C. Prohibitions

1. Industrial operations and structures are prohibited in Type 1 and 2 waters or on shoreline features and their contiguous areas abutting these waters.

D. Additional Category B Requirements

1. Applicants for activities involving power generation and petroleum processing, storage, and transfer are referred to the 1978 Energy Amendments to the Rhode Island Coastal Resources Management Program for additional detailed standards. The following summary defines the scope of the topics that shall be addressed by applicants for power generating and petroleum processing and storage as they apply to construction, operation, decommissioning, and waste disposal: (a) environmental impacts, (b) social impacts, (c) economic impacts, (d) alternative sites, (e) alternative means to fulfill the need for the facility, (f) demonstration of need, and (g) consistency with state and national energy policies. Shorefront sites shall demonstrate the need for access to navigable waters or cooling and/or process water.

The above requirements for energy facilities do not have to be addressed if the proposal is for an electrical generating facility of less than 10-megawatt capacity or for a petroleum storage facility of less than 2,400-barrel capacity. Such small-scale facilities shall be considered commercial or residential structures (Section 300.3).

E. Standards

1. See standards given in "Filling, Removing, or Grading" (Section 300.2), as applicable.

2. See standards given in "Residential, Commercial, Industrial, and Public Recreational Structures" (Section 300.3), as applicable.

3. See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

Section 300.9
Dredging and Dredged Materials Disposal

A. Definitions

1. Dredging: the excavation of sediments from beneath tidal and coastal pond waters by mechanical or hydraulic means.

Dredging for navigational purposes is divided into two categories: (a) improvement dredging includes new projects in previously un-dredged areas; and, (b) maintenance dredging includes projects whose purpose is to restore channels and basins to dimensions that support and maintain existing levels of use.

2. Dredged materials disposal: the process of discharging, depositing, dumping, or utilizing the sediments produced by a dredging operation.

B. Policies

1. The Council shall support necessary maintenance dredging activities in Type 2, 3, 4, 5, and 6 waters, provided environmentally sound disposal locations and procedures are identified.

2. The Council favors offshore open-water disposal for large volumes of dredged materials, providing that environmental impacts are minimized.

3. The Council encourages the use of innovative nearshore methods of dredged materials disposal, particularly when small volumes of material must be disposed. These options include creation of wetlands, shellfish habitat, and beach nourishment in suitable areas.

4. For disposal of dredged material resulting from maintenance dredging operations, provided the materials in question are predominantly clean sands, a Category A Review may be permitted provided the Executive Director determines that the disposal of the materials shall be for beach nourishment only, and the proposal meets the standards of Sections 110.1 and 300.9(f)(5) of this program.

C. Prerequisites

1. Permits for maintenance and improvement dredging and disposal projects for navigational purposes must be obtained from the Army Corps of Engineers as well as the Council. Council and Army Corps requirements are designed to complement one another; applicants should consider the requirements of both agencies when preparing to begin the permit process and may apply for CRMC and Army Corps permits concurrently.

2. Except for federal consistency reviews, applicants for dredging or open waters disposal of dredged materials shall be required to obtain a Section 401 (Clean Water Act) Water Quality Certification from the Department of Environmental Management (DEM) before the Council can consider granting approval for the project. The application for the Section 401 Water Quality Certification will be forwarded to the DEM when all Council application forms have been completed.

3. All materials to be dredged for either open water disposal or upland disposal must be classified by the Department of Environmental Management (DEM) based upon an approved analysis process prior to the Council acting on an application of either dredging or dredged materials disposal.

4. Any application for open water disposal of dredged materials shall have all requisite Army Corps of Engineers and Environmental Protection Agency (EPA) approvals.

5. All applicable requirements of the Freshwater Wetlands Act have or will have been met.

6. Upland disposal of dredged materials must comply with all applicable local zoning ordinances.

D. Prohibitions

1. The disposal of dredged materials on or adjacent to coastal wetlands in Type 1 and 2 waters is prohibited unless associated with a Council-approved program of wetland building or rehabilitation. The disposal of dredged materials is also prohibited on coastal wetlands designated for preservation in Type 3, 4, 5, and 6 waters (see Section 210.3).

2. No dredging for navigational purposes is permitted in Type 1 waters, and only maintenance dredging may be permitted in Type 2 waters.

E. Additional Category B Requirements

1. Applicants for all dredging projects shall provide accurate soundings in the area of the proposed dredging operation.

2. Applicants shall describe any temporary or permanent disturbance to a coastal feature which is required or anticipated in order to gain access for heavy equipment to the dredging or disposal site.

3. When fine-grained sediments are to be removed, the applicant shall install siltation curtains to control the transport of materials placed in suspension by dredging unless the applicant demonstrates to the Council on the basis of competent professional analysis that such transport will not be significant or will be controlled by other measures.

4. The applicant shall limit dredging and disposal to specific times of the year in order to minimize odors and/or impacts on fish and shellfish unless the applicant demonstrates to the Council on the basis of competent professional analysis that such odors or impacts will not be significant or will be controlled by other measures.

5. Applicants for improvements dredging projects shall describe, on the basis of competent professional analysis, anticipated siltation rates, sediment sources, and anticipated maintenance dredging needs.

6. When dredged materials are removed from a marine to an upland environment for disposal, the applicant shall demonstrate that the release of pollutants present in the materials shall not cause significant threats to groundwater or cause other environmental degradation.

7. Applicants proposing dredging operations associated with residential boating facilities must demonstrate that the purpose is to restore channels and basins to dimensions that support and maintain existing levels of use, and must submit clear and convincing evidence documenting a diminished use of a facility or navigational fairway by natural shoaling or accretion, not merely a need for additional water depth.

F. Standards

1. For dredging:

(a) Bottoms of dredged areas shall slope downward into the waterway so as to maximize tidal flushing.

(b) Bottom slopes at the edges of dredged areas shall have a maximum slope of 50 percent.

(c) Dredging shall be planned so as to avoid undermining adjacent shoreline protection facilities and/or coastal features.

(d) Shellfish dredged from waters classified SB or lower shall not be made available for human consumption or bait.

2. For dredged materials disposal in open water:

(a) Dredged materials may not be placed in areas determined by the CRMC to be prime fishing grounds.

(b) Measures must be employed and described to ensure that all dredged materials will be dumped solely within the confines of an approved site.

(c) Hydrographic conditions at the approved disposal site must be such that the disposed dredged materials will remain within the disposal area and that re-suspension of bottom sediments will be minimal.

(d) Following disposal operations involving polluted materials, clean coarse-grained materials must be deposited to cap the spoil mound and minimize the release of any potential contaminants to the water column. The cap shall have a minimum thickness of 6 inches.

(e) The applicant shall provide for an environmental monitoring program designed to detail physical conditions and biological activity at and near the site for a period of at least one year. The results of such programs shall be made public.

3. For dredged materials disposal in the creation of wetlands, aquatic habitat, or island:

(a) Disposal sites must be in sheltered environments which are approved by the Council for such purposes and are not prone to extensive wave or current energies yet subject to sufficient tidal action to provide adequate flushing.

(b) Dredged materials must be pumped or placed into a containment area that will permit sediment consolidation and prevent erosion.

(c) The applicant must provide for an environmental monitoring program designed to detail physical conditions and biological activity at and near the site for a period of at lease one

year. The results of such a program shall be made public.

(d) All applicable requirements of Section 300.2 shall be met.

4. For upland disposal:

(a) Dewatering of dredged materials shall occur behind a berm or bulkhead of sufficient height to contain the material.

(b) After dewatering, dredged materials placed on uplands adjacent to tidal waters shall be vegetated or otherwise permanently stabilized. Surface slopes of the disposal area shall be graded so as to prevent surface ponding.

(c) Where dredged materials are placed behind a wall or bulkhead: (1) the structure shall be suitably engineered to resist the pressures of the dredged material; (2) the material, including fines, shall be prevented from seeping through the wall or bulkhead by the placement of an adequate filtering device; and (3) all applicable standards listed for shoreline protection facilities (Section 300.7) shall be met.

(d) All applicable requirements of Section 300.2 shall be met.

5. Disposal for beach nourishment:

(a) The placement of dredged materials on a beach is a preferred disposal alternative, providing that the materials in question are predominantly clean sands possessing grain size and such other characteristics to make them compatible with the naturally occurring beach material.

(b) In areas where the processes of littoral drift would result in significant re-entry of dredged sediments into a navigable waterway, dredged materials must be placed on the downdrift side of the inlet.

(c) All applicable requirements of Section 300.2 shall be met.

Section 300.10. Filling in Tidal Waters

A. Definition

1. "Filling in Tidal Waters" is the placing of materials from upland sources below the mean high water and includes the utilization of dredged materials to create land in tidal waters for purposes other than those covered by the creation of wetlands and by beach replenishment or nourishment pursuant to Section 300.9. Filling which is determined by the Council to be incidental to activities conducted in accordance with Section 300.7 is not "filling in tidal waters" and is addressed by the Policies, Prerequisites, Prohibitions, Requirements, and Standards contained in Section 300.7.

B. Policies

1. It is the Council's policy to discourage and minimize the filling of coastal waters.

2. In considering the merits of any given proposal to fill tidal waters, the Council shall weigh the public benefit to be served by the proposal against the loss or degradation of the affected public resource(s).

3. Filling may be permitted where necessary for an approved erosion control or bulkheading project, but only when it has been demonstrated that the amount of filling has been minimized in accordance with the requirements of Section 300.7

C. Prerequisites

1. Except for federal consistency reviews, applicants for projects requiring filling in tidal waters shall be required to obtain a Section 401 (Clean Water Act) Water Quality Certification or its waiver from the Department of Environmental Management (DEM) before the Council can issue an assent for the project. The application for the Section 401 Water Quality Certification will be forwarded to the DEM when all Council Application forms have been completed.

2. Permits for projects requiring filling in tidal waters must be obtained concurrently from the Army Corps of Engineers and the Council. Council and Army Corps requirements are designed to complement one another; applicants should consider the requirements of both agencies when beginning the permit process. In some cases, the Council may require an applicant to obtain applicable Army Corps of Engineers permits prior to applying to the Council. A CRMC Assent is not valid unless the applicant has received all required Army Corps of Engineers approvals.

D. Prohibitions

1. Filling in Type 1 and 2 waters is prohibited.

2. Regulations governing the filling and other disturbances to wetlands are set forth in Section 210.3.

3. Filling in Type 3, 4, 5, and 6 waters is prohibited unless (a) the filling is made to accommodate a designated priority use for that water area; (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable; and (c) the filling is the minimum necessary to support the priority use.

E. Fees

See Section 160.

Section 300.11. Aquaculture

A. Definition

1. For the purpose of the Coastal Resources Management Council, aquaculture is defined as the culture of aquatic species under natural or artificial conditions in tidal waters and coastal ponds including but not limited to: fish farming utilizing pens, tanks, or impoundments; the culture of shellfish on the sea floor, in cages, or suspended from structures in the water; and the culturing of aquatic plants. **NOTE:** land-based aquaculture operations (i.e., above mean high water) are regulated under Section 300.3 of the RICRMP.

2. Transient or mobile aquaculture gear is defined as cages containing cultured species which are periodically moved about within a specified area so as to reduce user conflicts. This gear is typically in the form of wire cages which are either individually marked with a surface buoy or strung together in trawls with end buoys to identify the location of gear.

B. Policies

1. The CRMC recognizes that commercial aquaculture is a viable means for supplementing the yields of marine fish and shellfish food products, and shall support commercial aquaculture in those locations where it can be accommodated among other uses of Rhode Island waters.

2. The CRMC shall grant aquaculture applicants exclusive use of the submerged lands and water column, including the surface of the water, when the Council finds such exclusive use is necessary to the effective conduct of the permitted aquaculture activities. Except to the extent necessary to permit the effective development of the species of animal or plant life being cultivated by the permittee, the public shall be provided with means of reasonable ingress and egress to and from the area subject to an aquaculture lease for traditional water activities such as boating, swimming, and fishing. All plant and animal species listed for culture in an aquaculture lease are the personal property of the permittee.

3. At the discretion of the Council, leaseholders may be required to temporarily remove their aquaculture facilities when they are not being used to conduct research or to harvest an aquatic species of plant or animal for a substantial period of time. The Council may permit inactive facilities to remain if it determines that the temporary removal of these facilities would place an undue burden on the leaseholder.

4. The Council may require the removal of any aquaculture facility that is in an obvious state of disrepair or has become a navigation or safety hazard.

5. Upon application to renew an existing aquaculture Assent, the Executive Director may administratively renew said Assent for a period not to exceed that period set forth in Title 20 Chapter 10 of the General Laws for each renewable period, provided the applicant is in conformance with the terms and conditions of the Assent, the aquaculture lease, and with the Coastal Resources Management Program (RICRMP) in effect at the time of renewal provided, further, that there are no amendments to the Assent or lease. Report of such action by the Executive Director shall be made in writing to the full Council at the next regularly scheduled meeting of the Council.

6. In the event that a CRMC approved aquaculture operation is determined by the Council to not be actively "farmed" for a period of one year, the assent and lease shall be deemed null and void and the site shall be returned to the State's free and common fishery.

7. The Council may grant an aquaculture Assent for a period not to exceed that period set forth in Title 20 Chapter 10 of the General Laws.

C. Prerequisites

1. Prior to issuing a permit for aquaculture, the Council shall obtain and consider statements from the director of the Department of Environmental Management and the chairman of the Marine Fisheries Council, as required by Chapter 20.10 of the state's General Laws. The director of the Department of Environmental Management shall review the application to determine that the proposed activity will not adversely affect (a) marine life adjacent to the proposed area and the waters of the state, and (b) the continued vitality of indigenous fisheries. The chairman of the Marine Fisheries Council shall review the application to determine that it is consistent with competing uses involved with the exploitation of marine fisheries.

2. Permits for the possession, importation, and transportation of species used in aquaculture must be obtained from the director of the Department of Environmental Management.

D. Additional Category B Requirements

1. Applicants proposing to undertake any aquaculture endeavor shall (a) describe the location and size of the area proposed; (b) identify the species to be managed or cultivated within the permitted area and over which the applicant shall have exclusive right; (c) describe the method or manner of management or cultivation to be utilized, including whether the activities proposed are experimental, commercial, or for personal use; (d) provide such other information as may be necessary for the Council to determine: (1) the compatibility of the proposal with other existing and potential uses of the area and areas contiguous to it, including navigation, recreation, and fisheries; (2) the degree of exclusivity required for aquacultural activities on the proposed site; (3) the safety and security of equipment, including appropriate marking of the equipment and/or lease area; (4) the projected per unit area yield of harvestable product; (5) the cumulative impact of a particular aquaculture proposal in an area, in addition to other aquaculture operations already in place; (6) the capability of the applicant to carry out the proposed activities; and (7) the impact of the proposed activities on the scenic qualities of the area.

E. Prohibitions

1. Fish pen aquaculture operations are prohibited in all coastal ponds.

F. Standards

1. In the event of revocation, termination or expiration of any lease or Assent, the lessee or Assent holder is responsible for restoring the area to pre-existing conditions within ninety (90) days from the date of permit revocation, termination, or expiration. This shall include the removal of all structures, rafts, floats, markers, buoys, anchors, and other equipment brought to the site. Failure to comply with the Council's order to restore the site may result in the forfeiture of the permit bond posted by the lessee.

2. Any person who maliciously and willfully destroys, vandalizes, or otherwise disrupts aquaculture activities permitted by the Council shall be in violation of an order of the Council and libel to all fines and penalties under law.

3. All permittees shall mark off the areas under permit by appropriate ranges, monuments, stakes, buoys, or fences placed so as not to interfere unnecessarily with navigation and other traditional uses of the water surface. All authorized limitations upon the use by the public of areas subject to the permit shall be posted by the permittee.

4. The Council may require the leaseholder for an aquaculture facility to post a performance bond in order to ensure the cleanup and removal of said facility upon either the termination or expiration of the lease.

5. The Executive Director may approve the transfer of a lease from the lessee to another party provided the aquaculture operation remains the same, including size, species, gear, and methods of culturing. The full Council must approve any transfers that involve a deviation from the existing assented aquaculture operation.

6. Upon application, the Executive Director may issue an experimental aquaculture permit for operations which are expressly for the purpose of developing and testing new gear or techniques for aquaculture production. Applicants may be approved for three separate sites, with up to an area of one-thousand (1,000) square feet for each site. Experimental sites shall not be within 500 feet of one another. Areas in excess of this may be approved by the full Council. Experimental aquaculture Assents shall be valid for a period not to exceed two (2) years. A lease is not required unless the aquaculture product is sold commercially. Report of such action by the Executive Director shall be made in writing to the full Council at the next regularly scheduled meeting of the Council.

7. All transient aquaculture gear shall be operated within defined areas as established by the tidal water aquaculture management plan. Transient gear lease fees shall be based on the minimum area necessary to operate the proposed number of cages.

Section 300.12. Coastal Wetland Mitigation

A. Definitions

1. Alterations to coastal wetlands are defined to include, but shall not be limited to: filling, removing or grading (as defined in Section 300.2.A.); dredging and dredged materials disposal (as defined in Section 300.9.A.); and any significant cutting or removal of vegetation; and excavation, draining, damming and/or diverting of hydrological flows in a coastal wetland. Furthermore, any activity, including the aforementioned, taking place in an area adjacent to a coastal wetland which impacts the coastal wetland, shall be considered an alteration to coastal wetlands.

2. Activities which shall not be considered alterations include, but shall not be limited to; minor disturbances associated with the approved construction or repair of shoreline protection facilities in accordance with Section 300.7, minor disturbances associated with approved residential docks and walkways constructed in accordance with standards set forth in Section 300.4, insignificant or minor cutting or pruning of vegetation in accordance with a Council-approved management or restoration plan; and approved mosquito population control programs.

3. For the purposes of this section, mitigation is defined as avoidance and minimization of impacts and compensation for unavoidable losses by creating or restoring coastal wetlands. Mitigation projects are those projects undertaken to compensate for unavoidable losses after impacts associated with a proposed activity have been avoided and minimized to the maximum extent practicable. The Council recognizes the restoration of historic wetlands and the creation of new wetlands as the only acceptable means of compensating for unavoidable losses of coastal wetlands.

4. Wetland restoration is defined as the re-establishment of a wetland (on the site of an historical wetland) which has been degraded to such an extent that the site performs little or none of its original wetland functions.

5. Wetland creation is defined as the construction of a new coastal wetland where one had not previously existed.

6. Mosquito ditching is defined as the maintenance and construction of ditches in coastal wetlands in order to enhance tidal flushing and thereby reduce and control mosquito breeding sites.

7. Open Marsh Water Management is defined as the maintenance and construction of reservoirs and connectors in order to enhance the tidal food web and thereby reduce and control mosquito breeding sites.

B. Policies

1. In cases where the Council determines that a coastal wetland may be altered (see Section 210.3.C) or grants a special exception to a prohibition listed in Section 300.12.D the Council shall require the mitigation of all impacts to the coastal wetland. Permanently lost or significantly altered wetlands shall be replaced through the restoration of an historical wetland or the creation of a new wetland at a site approved by the Council.

2. The Council shall not grant any variance to the policies, standards, and prerequisites set forth in this section.

3. Pursuant to the Council's "no net loss" policy, the goal and minimum requirements of wetland mitigation projects shall be the replacement of permanently lost or significantly altered wetlands with wetlands of equal or greater area and ecological value. Mitigation projects shall be carried out in accordance with the standards set forth in section 300.12.E.

4. Wetlands created or restored for the purposes of replacing permanently lost or altered coastal wetlands shall be considered wetlands as defined in the RICRMP and subject to the policies contained in Section 210.3 (Coastal Wetlands), Section 140. (Setbacks) and Section 150. (Buffer Zones).

5. Activities listed in Section 300.12.A.2. shall be exempt from mitigation requirements. In addition, wetlands created for the purposes of stormwater management, erosion control, or waste management, in accordance with Section 300.6, shall not be subject to mitigation requirements.

6. Applicants proposing to alter coastal wetlands shall submit the application and the proposed mitigation plan concurrently. In cases where an applicant is proposing an alteration to coastal wetlands prohibited under Section 300.12.D, the

applicant shall be required to first meet the burdens of proof contained in Section 130 and obtain a Special Exception. If the applicant obtains a Special Exception, or a Special Exception is not necessary, then the Council shall consider the merits of the proposed alteration.

The Council shall not consider the mitigation plan in determining whether an assent shall be granted for the alteration of a coastal wetland, but shall require mitigation as a condition of the assent. If the Council approves the proposed alteration to a coastal wetland, then the applicant shall obtain the Council's approval of the mitigation plan prior to any alteration of the coastal wetland. The issuance of the assent to alter coastal wetlands subject to mitigation requirements will be based, in part, upon adequate assurance that required mitigation is feasible and will occur.

7. To the maximum extent practicable, mitigation projects shall be carried out prior to, or concurrent with, the approved alteration of the coastal wetland.

8. To the maximum extent practicable, mitigation projects shall be carried out on-site. Where no on-site alternative exists, the Council may consider off-site mitigation within a hydrologically connected area. In circumstances where an overall benefit to the state is demonstrated and no on-site alternative exists, the Council may approve mitigation projects outside the watershed in which the impact, due to the alteration of a coastal wetland, will occur.

9. In cases where the alteration is temporary, the disturbed wetland shall be restored, to the satisfaction of the Council, immediately following the permitted activity.

10. In no case shall monetary compensation be considered as an acceptable form of mitigation.

11. The Council may consider proposals for joint mitigation projects, advanced mitigation projects, and other innovative wetland mitigation approaches, such as mitigation banks, on a case-by-case basis.

12. The Council recognizes that successful mitigation projects depend on a number of variables including the type of wetland restored or created. Accordingly, replacement ratios contained in section 300.12.F shall be considered minimum requirements.

13. Recognizing that restored and created wetlands require a period of time to become established as functional coastal wetlands, the Council may require the applicant to post a bond to ensure compliance with the mitigation plan and other Council stipulations.

14. Any violation of the approved mitigation plan shall constitute a violation of the assent to alter the existing coastal wetland.

15. The Council recognizes the nuisance caused by large breeding populations of mosquitos in portions of some coastal wetlands. The Council recognizes that the problem can be effectively controlled by good wetland management practices that include open marsh water management, ditch maintenance and, in some cases, the limited use of pesticides.

C. Prerequisites

1. Applicants proposing any alteration to coastal wetlands prohibited in Section 300.12.D shall be required to obtain a Special Exception (Section 130) from the Council.

2. Applicants proposing alterations to coastal wetlands are required to obtain permits from the Army Corps of Engineers and applicable permits from the Department of Environmental Management. In some cases, mitigation projects will require additional permits from the Army Corps of Engineers and the Department of Environmental Management. Applicants shall consult with these agencies for a determination of the need for additional permits and obtain any required permits prior to undertaking any mitigation activities.

3. Mosquito control programs in any coastal wetland area will be considered only when authorization from the DEM Division of Fish and Wildlife, the R.I. Mosquito Abatement Board, and the local municipality has been obtained. Further, applicants should concurrently obtain a permit from the Army Corps of Engineers. However, in some cases the Council may require the applicant to first obtain an Army Corps of Engineers permit.

D. Prohibitions

1. All alterations to coastal wetlands abutting Type 1 waters are prohibited except for minimal alterations required for the construction or repair

of an approved or pre-existing structural shoreline protection facility (see Section 300.7) and alterations resulting from approved mosquito population control programs.

2. Alterations to coastal wetlands abutting Type 2 waters and coastal wetlands designated for preservation adjacent to Types 3,4,5 and 6 waters are prohibited except for minor disturbances associated (a) residential docks or walkways approved pursuant to the standards set forth in Section 300.4, (b) approved construction or repair of shoreline protection facilities, and (c) approved mosquito population control programs.

3. Alterations to coastal wetlands which are adjacent to Types 3, 4, 5 and 6 waters and which are not designated for preservation are prohibited unless: (a) the alteration is made to accommodate a designated priority use for that water area, (b) the applicant has examined all reasonable alternatives and the Council has determined that the selected alternative is the most reasonable, and (c) only the minimum alteration necessary to support the priority use is made.

4. The practice of applying broad spectrum persistent pesticides on any coastal wetland area is prohibited.

5. Future development on any mitigation site is prohibited. All alterations to mitigation sites other than those required to maintain, or enhance the restored or created coastal wetland are prohibited.

E. Additional Category B Requirements

1. Applicants shall demonstrate to the Council's satisfaction that (a) the proposed alteration will accommodate a priority use, as determined by the adjacent water type, (b) the alternative selected is the most reasonable for supporting that priority use, and (c) the proposed alteration is the minimum necessary to support that alteration.

2. Any mitigation plan submitted pursuant to this section shall include, but not be limited to, the following:

(a) A site plan accurately depicting wetlands which will be altered, the proposed mitigation site, existing buffer zones and proposed buffer zones;

(b) The size, in terms of surface area, of wetlands to be altered and of the proposed mitigation site. Surface areas shall not include buffer zones; however, alterations to existing buffer zones shall be described;

(c) A description of existing elevations, soil types, flora species, vegetative densities and habitats in the wetland to be altered and for the proposed mitigation site;

(d) A description of the hydrology of the existing wetland site and proposed mitigation site including ground water levels and, where applicable, tidal and salinity ranges of the site and of adjacent inundating waters;

(e) A description of any excavation, grading, filling, etc. to be conducted as part of the mitigation plan;

(f) A description of species to be planted or seeded, spacing of plantings and/or the density of seeding, the source of vegetation to be planted, and the source of any organic soils to be introduced at the mitigation site;

(g) A schedule for implementation of the mitigation plan;

(h) Success criteria, which shall include benchmark dates and minimum survivability rates for plantings/seedings;

(i) A monitoring program; and,

(j) Evidence of financial security.

F. Standards

1. For alterations to Coastal Wetlands:

(a) Altered coastal wetlands shall be replaced by wetlands of a similar type (as defined in Section 210.3.A) which provide an ecological value equal to or greater than that of the altered wetland.

(b) The following ratios of replacement coastal wetland to permanently altered or lost coastal wetland shall be considered minimum compensation requirements for mitigation projects:

i) 2:1, area of coastal wetland restored: area permanently altered or lost.

ii) 2:1, area of coastal wetland created: area permanently lost or altered.

Specific replacement requirements shall be determined on a case-by-case basis, taking into account such factors as size, type and ecological value of the existing coastal wetland, and the probability of achieving fully functional replacement at the proposed mitigation site. In no case shall the Council consider mitigation projects which do not meet these minimum compensation requirements.

(c) Restored and created coastal wetlands shall be subject to buffer zone and setback requirements.

2. For mosquito population control

(a) Alterations to coastal wetlands undertaken as part of a mosquito control program shall be minimal and shall utilize open marsh water management techniques in accordance with the most recent version of *Manual of Methods for Open Marsh Water Management in Rhode Island* (RIDEM).

(b) Wherever possible, marsh sediments excavated as part of an approved mosquito population control program shall be placed at the terminal end of a pre-existing mosquito ditch identified for abandonment. In cases where such a pre-existing mosquito ditch does not exist or is not a feasible sediment disposal site, marsh sediments shall be disposed of at a suitable upland location.

(c) Ditches shall be no more than 24 inches wide and not less one foot, nor more than 3 feet, deep.

Section 300.13. Public Roadways, Bridges, Parking Lots, Railroad Lines and Airports

A. Definition

1. For the purposes of this program, public roadways shall be defined as all roadways other than private driveways used to access either public or private roads.

2. The requirements of this section apply to all new roadways, highways, bridges, parking lots, railroad lines, and airports. Alterations and improvements to roadways, highways, bridges, parking lots, railroad lines, and airports are subject to the erosion control requirements contained in this section and Section 300.3. Alterations and improvements to roadways, highways, bridges, parking lots, railroad lines, and airports that result in new stormwater discharges or increase stormwater discharge volumes beyond pre-development levels are subject to the stormwater management requirements contained in Section 300.6 (excluded from these requirements are projects consisting only of pavement resurfacing, minor roadway repairs, or emergency drainage repairs).

B. Prohibitions

1. The construction of new public transportation facilities in tidal waters and on coastal features is prohibited with the following exceptions: (a) construction on developed barrier beaches may be permitted, subject to the requirements of Section 210.2; (b) unpaved vehicle trails and parking areas may be permitted on undeveloped barrier beaches (Section 210.2); and (c) construction may be permitted on manmade shorelines subject to the requirements of Section 210.6.

C. Policies

1. All roadways, highways, parking lots, railroads lines, and airports shall be planned, sited, and designed to: i) protect areas that provide important water quality benefits or are particularly susceptible to erosion and sediment loss; ii) limit land disturbances such as clearing and grading and cut and fill to reduce erosion and sediment loss; iii) limit disturbances of natural drainage features and vegetation; and iv) limit the increase of impervious surface areas, except where necessary.

2. All bridge structures shall be sited, designed, and maintained so that sensitive coastal habitat areas such as coastal wetlands and areas providing important water quality benefits are protected from adverse effects.

D. Standards

1. See standards given in "Filling, Removing, or Grading of Shoreline Features" (Section 300.2).

2. Permeable materials shall be utilized, where practicable, to surface roadways and parking lots on shoreline features adjacent to Type 1, 2, and 3 waters.

3. Applicants shall reduce erosion and, to the maximum extent practicable, retain sediment on-site during and after construction. Applicants shall prepare and implement an erosion and sediment control plan in accordance with all of the policies and standards contained in Section 300.2.

4. Applicants shall prepare and implement a stormwater management plan in accordance with the policies and standards contained in Section 300.6.

5. See the standards contained in "Treatment of Sewage and Stormwater (Section 300.6)".

Section 300.14
Maintenance of Structures

A. Definition

1. Maintenance of structures includes rebuilding, reconstructing, repairing or re-establishing to previously approved conditions and dimensions a damaged or deteriorated structure or facility. Maintenance includes only those activities that do not significantly alter the assented design, purpose and size of the structure. Maintenance provisions for marina in-water facilities and residential boating facilities are found at Section 300.4.E.

B. Policies

1. Persons proposing to maintain dredged channels and mooring areas (Section 300.9) and mosquito control ditches in coastal wetlands (Section 300.12) are in all cases required to obtain a new Council Assent.

2. Maintenance of structures and facilities for which a Council Assent has been issued is permitted upon obtaining a Certification of Maintenance from the Executive Director of the CRMC. This Certification shall establish that all applicable standards for the construction and operation of the permitted structure or facility, and any stipulations that were conditioned by the Council's Assent have been met, and are continued. Further, the Certification of Maintenance may contain additional measures to minimize the environmental impact of the activity, to promote the restoration of coastal resources, or to otherwise further the objectives and goals of this program, as may be required by staff recommendations to the Executive Director, consistent with the standards of the RICRMP.

3. Persons proposing to maintain or repair structural shoreline protection facilities shall do so in a manner consistent with Section 300.7.G.

4. Persons proposing to maintain previously assented structures (other than piers and docks associated with marinas) which have physically been destroyed 50 percent or more by storms, waves, or other natural coastal processes shall, upon the determination of the Executive Director, be required to obtain a new Council Assent. Such activities requiring a new Council Assent shall be reviewed according to the most current applicable programmatic requirements of the Coastal Resources Management Program, its Special Area Management Plans, and/or any other appropriate CRMC-approved management plans.

5. Many structures under Council jurisdiction predate the Council and were not permitted by Council Assent when originally constructed. Persons proposing maintenance or repair activities on such structures shall be required to obtain a Certification of Maintenance, meet relevant standards of this program, or obtain a Council Assent, as determined by the Council's Executive Director. Persons proposing to (a) demolish structures, (b) repair structures which have been physically destroyed 50 percent or more as a result of storm induced flooding, wave, or wind damage, and (c) repair structures which have been destroyed 50 percent or more by fire shall be required to submit an application and meet the current programmatic requirements.

6. All activities, except those noted in Section B.5, for which a Certification of Maintenance is requested, shall have a valid Council Assent.

7. It is the Council's intent to allow for the continued maintenance and viability of marina operations that exist in and adjacent to the coastal waters of the state. In Type 3, 4, 5 and 6 Waters maintenance dredging, dock reconfiguration, activities such as travel lift operations and other best available technologies, and other ancillary activities necessary to maintain the operational viability of the facility should be expected to occur. The Council has detailed this policy in its handout entitled "Marina Certification Program." (Pre-existing marinas in Type 2 Waters are covered at 200.2.) The Marina Certification Program allows for certain maintenance activities to occur at marina facilities with approved marina perimeters. In order to be eligible for this policy, applications for marina certification must be submitted to the CRMC before October 1, 1994.

8. Minor repairs to boating facilities registered in accordance with the Council's Dock Registration Program and authorized by the Council are permitted without further review provided that the repairs will not alter the previously authorized design, capacity, purpose, or use of the facility. Minor repairs shall only include the repair or replacement of: decking (does not include stringers); handrails; ladders; and, electrical wiring and fixtures.

C. Prerequisites

1. All applicants for a Certification of Maintenance shall submit for review a valid Council Assent, dimension and/or site plans, photographs, or other information as required to make a proper determination of the nature of the request.

Section 300.15. Municipal Harbor Regulations

A. Definitions

Municipal harbor rules, regulations and programs include all rules, regulations, programs or management functions exercised by a municipality that apply to the use of tidal waters adjacent to a municipality.

B. Additional Category B Requirements

1. All municipalities proposing to adopt harbor rules, regulations, or programs shall apply to the Council for a determination of consistency with the Coastal Resources Management Program. Municipalities are referred to the Guidelines for the Development of Municipal Harbor Management Plans for additional detailed standards in establishing harbor rules, regulations or programs.

2. When a city or town enacts a police ordinance under G.L.R.I. 46-4-2, it shall not be required to request a determination of consistency with the Coastal Resources Management Program unless such by-law or ordinance affects the planning, regulation, or coordinating functions of the Council.

3. The Executive Director is authorized to approve, administratively, municipal harbor regulations and ordinances for an interim period of one year, provided:

a) The municipality submits an application for review and approval, by the Executive Director, such that present conditions of the harbor and the uses made of it can be examined;

b) In the meantime the municipality undertakes and prepares a comprehensive harbor management plan, in conformance with the policies and requirements of the CRMP, as amended;

c) Until such time as a comprehensive harbor plan is prepared, all activities regulated throughout the CRMP, or which take below the mean high water mark, must come before the CRMC for review and approval, in accordance with established procedures.

Section 310. Alterations to Freshwater Flows to Tidal Waters and Water Bodies and Coastal Ponds

A. Definitions

1. Alterations to the flows of tributaries include the installation of dams or other devices that alter flows of tributaries to tidal waters and that significantly change the timing and/or volumes of fresh water to coastal waters. Such alterations have a reasonable probability to conflict with a Council plan or program for resources management or may significantly affect the environment of the coastal region.

2. Alterations to the circulation of tidal waters include all structures that alter the behavior of waters within tidal water bodies, including the removal of tidal waters for industrial cooling or other purposes and the installation of structures in embayments and salt ponds that alter the volumes and/or timing of exchange with outlying tidal waters.

B. Policies

1. The Council recognizes that alterations to the volume of fresh water discharged to estuarine water bodies can have a significant effect on the species and abundance of organisms present in the estuary and may also cause changes to sedimentation, erosion patterns, and flooding.

2. It is the Council's policy to maintain and enhance anadromous fish runs and to consult with the Department of Environmental Management when considering proposals that may affect these features.

C. Prerequisites

1. The construction of dams, tidal gates, and other structures affecting flows of tributaries and the circulation of tidal water bodies shall require an Army Corps of Engineers permit.

D. Standards

1. See standards given in "Filling, Removing, or Grading of Shoreline Features" (Section 300.2), as applicable.

2. See standards given in "Construction of Shoreline Protection Facilities" (Section 300.7), as applicable.

3. See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

Section 320. Inland Activities and Alterations That Are Subject To Council Permitting

A. Definitions

1. The activities and alterations inland of shoreline features and their contiguous areas within state boundaries that may require a Council Assent are solid waste disposal; minerals extraction; chemical processing, transfer, and storage; power generation (excluding facilities of less than a 40-megawatt capacity); petroleum processing, transfer, and storage (excluding storage facilities of less than 2,400-barrel capacity); and sewage treatment and disposal (excluding individual sewage disposal systems).

2. Subdivision shall mean the division of a lot, tract, or parcel of land into two (2) or more lots, tracts, parcels or other divisions of land for sale, lease or other conveyance or for development simultaneously or at separate times. It also includes re-subdivision and when appropriate to the context, shall relate to the process of subdividing or to land subdivided. In computing six units or more the units shall be a total cumulative number of units on the property proposed after March 11, 1990, irrespective of ownership of the property or when the units are proposed.

B. Policies

1. The Council shall review all proposals inland of the area contiguous to shoreline features which involve any of the above identified activities and alterations. The Council shall determine whether such proposals have a reasonable probability of conflicting with this Program or with adopted CRMC Special Area Management Plans, or have the potential to damage the coastal environment. Since, with the exception of those activities defined below, it is not practically feasible for persons proposing every activity that may come under Council jurisdiction to undergo such a review, the Council's policy is to assume the responsibility of informing parties proposing such inland activities or alterations when such a review is considered necessary. Where Council jurisdiction has established that there is a reasonable probability of conflict with this Program or an adopted CRMC Special Area Management Plan, or where potential exists to damage the coastal environment, the Council shall require that an Assent be obtained and that suitable modifications to the proposal be made.

2. Persons proposing subdivisions, co-operatives, and other multi-ownership facilities, [of six (6) units or more] or activities generating more than 40,000 square feet of impervious surface any portion of which extends onto a shoreline feature or its contiguous area, or within critical coastal areas, are required to apply for a Council Assent.

Applicants proposing any of these activities shall satisfy all requirements specified in the RICRMP and any applicable special area management plan. Applicants shall also submit the following with their applications:

(a) A Stormwater Management Plan as required in Section 300.6 and as described in the most recent version of the *Rhode Island Stormwater Design and Installation Manual.*

(b) A soils map of the property (suggested scale 1:200) with an accompanying analysis of the best-use potential of the soils present; the soils maps and use potentials analysis prepared by the U.S. Soil Conservation Service should be used as the basis for this analysis.

(c) An overlay map showing the principal vegetation types or any significant features identified by the Natural Heritage Program of the Department of Environmental Management and the Historic Preservation Commission on the property; the maps prepared by McConnell (1974) and Kupa and Whitman (1972) may be the basis for information on vegetation.

(d) An overlay showing the proposed subdivision layout, including buildings, roadways, parking areas, drainage systems, sewage treatment and disposal facilities, and undisturbed lands.

(e) A Site Plan as detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual.*

Applicants shall submit this information to the Council for review at the earliest stages of planning such projects and are required to utilize the Council's Preliminary Determination process in accordance with applicable requirements of the Land Development and Subdivision Review

Enabling Act (R.I.G.L. 45-23-25 et. seq). Where so requested, all parties shall discuss their findings and recommendations at the municipality's pre-application conference, preliminary hearing, or similar proceeding. The findings and recommendations resulting from the coordinated, joint review shall be forwarded to the full Council. Where the Council finds a reasonable probability of conflict with this Program or with an adopted CRMC Special Area Management Plan, or finds there is a potential to damage the coastal environment, the Council shall require that suitable modification to the proposal be made or shall deny its Assent.

3. In those cases where a subdivision has been approved by the Council, any person wishing to conduct an approved activity, in accordance with the stipulations of the Council Assent, need not apply for a separate Assent unless so required by a stipulation of the Assent.

4. Applicants proposing the following projects are required to submit these projects for the Council's review:

a) Power-generating plants (excluding facilities of less than a 40-megawatt capacity);

b) Petroleum storage facilities (excluding storage facilities of less than 2,400-barrel capacity);

c) Chemical or petroleum processing facilities;

d) Minerals extraction;

e) Sewage treatment and disposal facilities (excluding individual sewage disposal systems);

f) Solid waste disposal facilities; and,

g) Desalination plants.

Applicants proposing these activities shall demonstrate in writing that the Additional Category "B" requirements contained in Section 300.1 have been satisfied. If the Council determines that there is a reasonable probability that the project may impact coastal resources, then it shall be required to obtain a Council Assent in accordance with all applicable requirements of this program.

C. Prerequisites

1. Solid waste disposal: permits from the Department of Environmental Management are required pursuant to the Solid Waste Management Act; and Air Quality Permit will have to be obtained from DEM if disposal practices include incineration. Disposal of hazardous wastes requires DEM permits pursuant to the R.I. Hazardous Waste Management Program as well as EPA permits.

2. Minerals extraction: DEM may require a wetlands permit and a Section 401 Water Quality Certification; the U.S. Department of Interior, Office of Surface Mining, issues permits for mining operations not including sand and gravel extraction.

3. Chemical processing, transfer, and storage: DEM may require permits pursuant to the Solid Waste Management Act and the R.I. Hazardous Waste Management Program, as well as an Air Quality Permit, Section 401 Water Quality Certification, and a Spill Contingency Plan. The DEM may require a Rhode Island Pollution Discharge Elimination System (RIPDES) permit.

4. Power generation: persons proposing a hydroelectric plant are required by DEM to obtain a Wetlands Permit, Dam Safety Certificate, and a Section 401 Water Quality Certification; a Preliminary Permit will also have to be obtained from the Federal Energy Regulatory Commission (FERC). Other power-generating facilities may require a DEM Air Quality Certificate, Section 401 Water Quality Certification, and Spill Contingency Plan. An NPDES permit may have to be obtained from EPA Region 1.

5. Petroleum processing, transfer, and storage: DEM may require an Air Quality Certificate, a Section 401 Water Quality Certification, and a Spill Contingency Plan.

6. Sewage treatment and disposal: DEM requires an ISDS permit for on-site sanitary sewage disposal. Other facilities may require: an Underground Injection Control permit from the DEM; a DEM Section 401 Water Quality Certification, or a RIPDES permit from DEM.

D. Additional Category B Requirements

1. Applicants proposing energy-related facilities are referred to the Energy Amendments adopted by the Council in 1978.

2. Persons proposing subdivisions, co-operatives, and other multi-ownership facilities, of six (6) units or more, or facilities which use larger Individual Sewage Disposal Systems (as defined in the RIDEM regulations for Individual Sewage Disposal Systems) which are designed, installed, or operated as a single unit to treat more than 2,000 gallons per day or any combination of systems owned or controlled by a common owner and having a total design capacity of 2,000 gallons per day, or facilities requiring one acre or more of parking, any portion of which extends onto a shoreline feature or its contiguous area, or within the watershed of the poorly flushed estuaries delineated on the maps accompanying this program, are required to apply for a Council Assent. Applicants shall submit the following information to the Council for review in the early stages of planning such facilities:

(a) A soils map of the property (suggested scale 1:200) with an accompanying analysis of the best-use potential of the soils present; the soils maps and use potentials analysis prepared by the U.S. Soil Conservation Service should be used as the basis for this analysis.

(b) An overlay map showing the principal vegetation types or any significant features identified by the Natural Heritage Program of the Department of Environmental Management and the Historic Preservation Commission on the property; the maps prepared by McConnell (1974) and Kupa and Whitman (1972) may be the basis for information on vegetation.

(c) An overlay showing surface drainage patterns and, where available, information on the depth to groundwater and the direction and volume of groundwater flows.

(d) An overlay showing the proposed subdivision layout, including buildings, roadways, parking areas, drainage systems, sewage treatment and disposal facilities, and undisturbed lands.

This information shall be forwarded by the Council to other divisions of DEM for concurrent review. The city or town in which the action is proposed shall be notified of the review and invited to participate; where so requested, all parties shall discuss their findings and recommendations at the municipality's pre-application conference, preliminary hearing, or similar proceeding. The findings and recommendations resulting from the coordinated joint review shall be forwarded to the full Council. Where the Council finds a reasonable probability of conflict with this Program or with an adopted CRMC Special Area Management Plan, or finds there is a potential to damage the coastal environment, the Council shall require that suitable modification to the proposal be made or shall deny its Assent.

3. In those cases, where a subdivision has been approved by the Council, any person wishing to conduct an approved activity, in accordance with the stipulations of the Council Assent, need not apply for a separate Assent unless by permit condition.

4. Subdivision shall mean the division of a lot, tract, or parcel of land into two (2) or more lots, tracts, parcels or other divisions of land for sale, lease or other conveyance or for development simultaneously or at separate times.

It also includes re-subdivision and, when appropriate to the context, shall relate to the process of subdividing or to land subdivided.

5. In computing six units or more the units shall be a total cummulative number of units on the property proposed after March 11, 1990, irrespective of ownership of the property or when the units are proposed.

E. Standards

1. See standards given in "Filling, Removing, or Grading" (Section 300.2), as applicable.

2. See standards given in "Residential, Commercial, Industrial, and Public Recreational Structures" (Section 300.3), as applicable.

3. See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

Section 325. Activities Located within Critical Coastal Areas

A. Definitions

1. Critical coastal areas, which include watersheds of poorly flushed estuaries, are geographic areas which may vary in their ecological functions and generally require specific initiatives to manage them. Thus the CRMC has developed special area management (SAM) plans in order to address the specific environmental concerns of these priority management areas and to carry out its federal mandate for managing areas of particular concern. The CRMC SAM plan for Providence Harbor addresses issues such as water quality, public access, and urban waterfront development. The Interstate SAM plan for the Pawcatuck River Estuary and Little Narragansett Bay is a management plan which addresses public access, water quality, recreational boating, and inter-state coordination issues with Connecticut. The SAM plans for the Narrow River and Salt Pond regions address cumulative and secondary impacts of development in, and adjacent to, poorly flushed estuaries, and focus primarily on nonpoint source pollution, groundwater contamination, and on-site sewage disposal systems (OSDSs). The following apply to activities within critical coastal areas.

2. Subdivision: shall mean the division of a lot, tract, or parcel of land into two (2) or more lots, tracts, parcels or other divisions of land for sale lease or other conveyance or for development simultaneously or at separate times. It also includes re-subdivision and when appropriate to the context, shall relate to the process of subdividing or to land subdivided. In computing six units or more the units shall be a total cumulative number of units on the property proposed after March 11, 1990, irrespective of ownership of the property or when the units are proposed.

B. Findings

1. It is the goal of the Council to manage the watersheds of poorly flushed estuaries and critical coastal areas as an ecosystem, and to maintain the scenic qualities and habitats of the region, in addition to the diversity and intensity of activity. This requires that the Council balance multiple uses of the region, while preserving and, where possible, restoring the environmental quality. Managing these ecosystems requires managing the impacts associated with onsite sewage disposal, nutrient loadings to groundwater, stormwater runoff, erosion and sedimentation, changes in salinity levels, alterations to wetlands, and the degradation of other sensitive aquatic and terrestrial habitats as a result of development. Because the poorly flushed estuaries are particularly susceptible to the cumulative and secondary impacts of development, managing these ecosystems requires a comprehensive and coordinated long-term management approach as well as protective measures in excess of those afforded by the RICRMP.

Accordingly, the Council has developed Special Area Management Plans which contain ecosystem-based management strategies that address diverse issues consistent with the Council's legislative mandate to preserve and restore ecological systems. Central to this strategy is the recognition of complex interrelationships within the ecosystem. Special pollution concerns as well as cumulative and secondary impacts of various development activities on coastal resources require the Council to review specified activities inland of the 200 foot contiguous area within critical coastal areas because the activities have a reasonable probability of conflicting with the goals and objectives of the special area management plans and lead to clear impacts on coastal resources. The specified activities correspond to major land uses and impacts on the ecosystem.

C. Policies

1. Since, with the exception of those activities defined below, it is not practical for every activity that may come under Council jurisdiction to undergo review, the Council's policy is to assume the responsibility of informing parties proposing such inland activities or alterations when such a review is considered necessary.

The Council has determined that the following activities within the watersheds of poorly flushed estuaries have a reasonable probability of conflicting with the management goals and objectives of this program or the Council's special area management plans:

a) Subdivisions, cooperatives, and other multi-ownership facilities [of six (6) units or more];

(b) A structure serviced by an on-site sewage disposal system serving 2,000 gallons or more per day;

(c) An activity which results in the creation of 40,000 sq. ft. or more of impervious surface;

d) Construction or extension of municipal or industrial sewage treatment facilities and sewer lines; and,

e) Construction or extension of water distribution systems and/or supply lines.

Applicants proposing these activities within critical coastal areas are required to apply for a Council Assent.

2. Applicants proposing any of the activities identified above shall satisfy all applicable requirements specified in the RICRMP as well as the Council's special area management plans. Applicants are also required to submit the following with their applications:

a) A Stormwater Management Plan prepared in accordance with Section 300.6.

b) An erosion and sediment control plan prepared in accordance with the standards contained in Section 300.2.

c) A soils map of the property (suggested scale 1:200) with an accompanying analysis of the best-use potential of the soils present; the soils maps and use potentials analysis prepared by the U.S. Soil Conservation Service should be used as the basis for this analysis.

d) An overlay map showing the principle vegetation types or any significant features identified by the Natural Heritage Program of the Department of Environmental Management and the Historic Preservation Commission on the property; the maps prepared by McConnell (1974) and Kupa and Whitman (1972) may be the basis for information on vegetation.

e) An overlay showing the proposed subdivision layout, including buildings, roadways, parking areas, drainage systems, sewage treatment and disposal facilities, and undisturbed lands.

f) A Site Plan as detailed in the most recent version of the *Rhode Island Stormwater Design and Installation Standards Manual.*

The city or town in which the action is proposed shall be notified of the review and invited to participate. Applicants for subdivisions shall submit this information to the Council for review at the earliest stages of planning such projects and are required to utilize the Council's Preliminary Determination process in accordance with applicable requirements of the Land Development and Subdivision Review Enabling Act (R.I.G.L. 45-23-25 et. seq). Where so requested, all parties shall discuss their findings and recommendations at the municipality's pre- application conference, preliminary hearing, or similar proceeding. The findings and recommendations resulting from the coordinated, joint review shall be forwarded to the full Council. Where the Council finds a reasonable probability of conflict with this Program or with an adopted CRMC Special Area Management Plan, or finds there is a potential to damage the coastal environment, the Council shall require that suitable modification to the proposal be made or shall deny its Assent.

3. Applicable requirements of the RICRMP shall apply unless superseded by the requirements of a special area management plan.

4. In those cases where a subdivision has been approved by the Council, any person wishing to conduct an approved activity, in accordance with the stipulations of the Council Assent, need not apply for a separate Assent unless so required as a stipulation of Assent.

D. Standards

1. See standards given in "Filling, Removing, or Grading" (Section 300.2) as applicable.

2. See standards given in "Residential, Commercial, Industrial, and Public Recreational Structures" (Section 300.3), as applicable.

3. See standards given in "Sewage Treatment and Disposal" (Section 300.6), as applicable.

Section 330. Guidelines for the Protection and Enhancement of the Scenic Value of the Coastal Region

A. General Guidelines

1. The primary goal of all Council efforts to preserve, protect, and, where possible, restore the scenic value of the coastal region is to retain the visual diversity and often unique visual character of the Rhode Island coast as it is seen by hundreds of thousands of residents and tourists each year from boats, bridges, and such public vantage points as roadways, public parks, and public beaches.

2. Every effort should be made to safeguard from obstruction significant views to and across the water from highways, scenic overlooks, public parks, and other vantage points enjoyed by the public.

3. The importance of the skyline as seen from tidal waters in determining the character of a view site must be recognized; it should, where possible, not be disrupted by visually intrusive structures.

4. On sites in or adjacent to historic features and districts, new structures should be designed to provide continuity with the existing scenic and historic character. Within historic districts, applicants shall consult with the Historic Preservation Commission to identify means for minimizing disruption and, where possible, enhancing the historic value of the area.

5. Excellent guidance for preserving the visual character and quality of coastal landscapes in Rhode Island are contained in "Building at the Shore: A Handbook for Residential Development on the Rhode Island Coast." Review copies are available at the Council's offices in Providence.

B. In and Adjacent to Type 1, 2, and 4 Waters

1. Structures along the water's edge should be screened by vegetation, preferably with native species typical to the area rather than exotic.

2. Trees that form the first line of visual definition as one looks landward from the water should be preserved.

3. In new developments, trees should be planted in the drifts that generally follow land contours and parallel the water's edge rather than in lines that cut across landscape contours.

4. Disruptions of natural landform and vegetation should be minimized.

5. New developments should not compete visually with such significant shoreline features as coves, peninsulas, cliffs, and bluffs; they should be set back and screened.

C. In and Adjacent to Type 3, 5, and 6 Waters

1. In all areas adjacent to Type 3 and 5 waters and, where appropriate, adjacent to Type 6 waters, the public should, where possible, be provided a sense of the water from within the townscape. Views to and across the water through yards, between houses, and from roadways should be preserved and, where possible, created.

2. When new structures are proposed adjacent to Type 3 and 5 waters, the character of new structures should be consistent and in character with existing buildings. The design of new structures should be based on an analysis of the patterns of existing buildings, including rooflines, roof slopes, building materials, colors, and window patterns. It is not necessary, however, to imitate pre-twentieth-century structures.

Glossary

agency. Boards, commissions, departments, or offices thereof, other than the legislature or the courts, authorized by law to make rules, determine contested cases, or issue permits.

agricultural land. (1) Tilled or tillable land upon which a crop is being or has recently been produced; (2) actively managed orchards, nurseries and cranberry bogs, and (3) land used for livestock pasturing.

alterations to freshwater flows to tidal waters and water bodies and coastal ponds. See Section 310.

anadromous fish. Oceanic or estuarine species that spawn in fresh water.

aquaculture. See Section 300.11

areas of historic and archaeological significance. See Section 220.

barrier beach. See Section 210.2.

beach grass. The dominant vegetative cover of sand dunes (Ammophila spp.).

breachway. A connecting channel, usually between a coastal pond and the ocean, which permits water exchange between the two.

breakwaters and jetties. See Section 300.7.

buffer zone. A land area on or contiguous to a shoreline feature that is retained in its natural undisturbed condition.

bulkhead. See Section 300.7.

cease and desist orders. See Section 170.

coastal beaches and dunes. See Section 210.1.

coastal headlands, bluffs, and cliffs. See Section 210.4

coastal environment. The complete system of living organisms and physical surroundings within the waters and shorelands of estuaries, the nearshore ocean and the terrestrial areas influenced by this system.

coastal ponds. A coastal lagoon usually located

behind a barrier which, in its natural condition, permanently or occasionally exchanges waters with the ocean.

coastal wetlands. See Section 210.3

compelling public purpose. Of such concern to the public welfare that it outweighs private of individual interests.

Council. The Rhode Island Coastal Resources Management Council.

Council meeting. Any meeting of the full Council or a subcommittee.

Council representative. A person appointed or employed as the Council's representative or agent.

depositing shore. A shore which is accumulating sand or other sediments, as opposed to a shore which is eroding.

developed barrier beaches. See Section 210.2

development. Any material change in the use of any structure or land or water body, including but not limited to any building mining, dredging, fillings, excavation, or drilling operation: alteration of the shore, rivers, streams, lakes or ponds: devegetation, demolition, deposition of fill, solid or liquid waste: construction, installation, reconstruction of a structure: a change in the type of class or use of land: or a material increase in the intensity of use.

discharge. Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping either directly or indirectly to the waters of the state of Rhode Island.

dune. See Section 210.7

ecosystem. A system formed by the interaction of a community of organisms with their environment.

effluents. The outflow from a river, a pipe, or other watercourse.

energy-related activities and structures. See Section 300.8.

estuary. A semi-closed body of water that has free connection with the open sea within which seawater is measurably diluted with fresh water derived from land drainage.

eutrophication. Nutrient enrichment to the aquatic environment, leading to excessive growth to aquatic plants, which can detrimentally alter water quality parameters, particularly oxygen concentration.

fauna. Animal life.

filling in tidal waters. See Section 300.10.

filling on shoreline features. See Section 300.2.

floating business. See Section 300.5.

flora. Plant life.

footprint. The square footage of the ground floor area encompassed by the structural foundation of a building.

glacial till. Unconsolidated and unsorted material left by the movement of glaciers, consisting of clay, sand, gravel, and boulders.

grading of shoreline features. See Section 300.2.

groin. See Section 300.7.

houseboat. See Section 300.5.

hydrologic. Related to **water.**

individual sewage disposal system (ISDS). See Section 300.6

larva. The early form of an animal that at birth or hatching is fundamentally unlike its parent and must metamorphose before assuming the adult form.

launching ramp. See Section 300.4.

license. Includes the whole or part of any agency permit, certificate, approval, registration, charter, or similar form of permission required by law, no including those required solely for revenue purposes.

longshore current. A current that flows parallel and adjacent to the shoreline.

maintenance of structures. See Section 300.14.

manmade shoreline. See Section 210.6.

marina. See Section 300.4.

mosquito control ditching. See Section 300.12.

municipal harbor regulations. See Section 300.15.

ocean dumping. Disposal of non-dredged waste materials from vessels or by other means into marine waters: ocean dumping does not include discharges of effluent incidental to the operation of vessels, the dumping of fish wastes, or the placement or deposit of materials on the sea floor for the purpose of enhancing fisheries.

one-hundred-year flood level. The area above mean high water which has a probability of being flooded once in a one-hundred-year period. The line has been designated by the Department of Housing and Urban Development.

person. Any individual, partnership, corporation, association, governmental subdivision, or public or private organization of any character other than an agency.

petroleum hydrocarbons. A compound originating from an oil, gas, or other petroleum base, and composed primarily or hydrogen and carbon.

petroleum products. Includes crude or refined oils, kerosene, gasoline, natural gas, or liquified natural gas (LNG), liquified petroleum gas (LPG), synthetic natural gas (methane or SNG), or other petroleum derivatives.

physiographic features. A landform or element of the landscape.

plankton. Small, suspended aquatic plants and animals which drift or swim weakly in the water column.

priority of use. Reflection of the Council's assessment of those uses deemed most likely to be consistent with adopted Council policies and regulations.

Program. As stated in this document, the State of Rhode Island Coastal Resources Management Program.

public roadways, bridges, and parking lots, railroad lines and airports. See Section 300.13.

recreation. Any voluntary experience engaged primarily during leisure time from which the individual derives satisfaction.

recreational mooring area. See Section 300.4.

removing a shoreline feature. See Section 300.2

residential boating facilities. See Section 300.4.

residential, commercial, industrial, and public recreational structures. See Section 300.3.

restoration. Return to a condition closely resembling a former, original, normal, or unimpaired condition.

restoration orders. See Section 170.

revetment. See Section 300.7.

riparian rights. The rights of a person owning land containing or bordering on a watercourse related to access to the water, certain privileges regarding its uses, and the benefits of accretions and relictions.

riprap. See Section 300.7.

rocky shore. See Section 210.5.

runoff. That portion of precipitation which is not absorbed into the ground and which drains naturally or through manmade channels to surface water bodies.

scarp. A line of cliffs, bluffs produced by faulting or erosion.

seawall. See Section 300.7.

sedimentation. The settling to the bottom of suspended sediments.

setbacks. The minimum distance from the inland boundary of a coastal feature at which an approved activity or alteration may be permitted.

sewage. See Section 300.6.

sewage treatment plant. See Section 300.6.

shoreline category/type. One of the seven categories of Rhode Island Shoreline designated as part of this Program.

shoreline protection facilities. See Section 300.7.

significant damage to the environment. Detriment, harm, or destruction of the

environment, as opposed to damage of trivial consequence.

siltation curtains. Devices placed in the water during a dredging operation or other activity which resuspends bottom sediments in order to prevent the spreading of those sediments.

Special Exceptions. See Section 130.

storm surge. An elevation in the sea surface from the effects of a storm.

substantive objections. See Section 110.3.

undue hardship. An inappropriate, unsuitable, unlawful, or excessive standard or requirement levied upon an applicant.

variance. See Section 120.

violation and enforcement actions. See Section 170.

water-dependent activity use. Activities or uses which can only be conducted on, in, over, or adjacent to tidal waters or coastal ponds because the use requires access to the water from transportation, recreation, energy production, or source of water: also includes non-water-dependent activities that provide access to the shore to broad segments of the public.

water use category/type. One of six use designations assigned to Rhode Island coastal waters as part of this Program.

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Maps of Water Use Categories

Boundary Line Designations

The following boundary line designations describe those points along the coastline where one water use type changes to another. Each mapped boundary is coded by letter on each quadrangle map to a verbal description as listed below. Except where otherwise noted, the water use classifications along any shoreline reach and between any two boundary line designations run parallel to the general coastal trend and extend 500 feet seaward from the mean high water mark. All water areas within the bounds of channel markers as depicted on U.S. Department of Commerce Nautical Charts #13221 and #13205 (1978) are considered navigation channels, and are classified as type 3, 4, 5, or 6 waters, as appropriate.

Legend

Water use category

Type 1 conservation areas (Section 200.1)
Type 2 low-intensity use (Section 200.2)
Type 3 high-intensity boating (Section 200.3)
Type 4 multipurpose waters (Section 200.4)
Type 5 commercial and recreational harbors (Section 200.5)
Type 6 industrial waterfronts and commercial navigation channels (Section 200.6)

Boundary between water use categories

Coastal wetland in Type 3, 4, 5, and 6 waters designated for preservation (Section 210.3)

Boundary of barrier beaches (Section 210.2 and Table 4)

D developed barrier beach
M moderately developed barrier beach
U undeveloped barrier beach

Erosion-prone area requiring additional setbacks for selected structures (see Section 140)

(A) 75-foot setback
(B) 120-foot setback
(C) 150-foot setback
(D) 180-foot setback

Watershed of poorly flushed estuaries where the review of proposed subdivisions is required (Section 320)

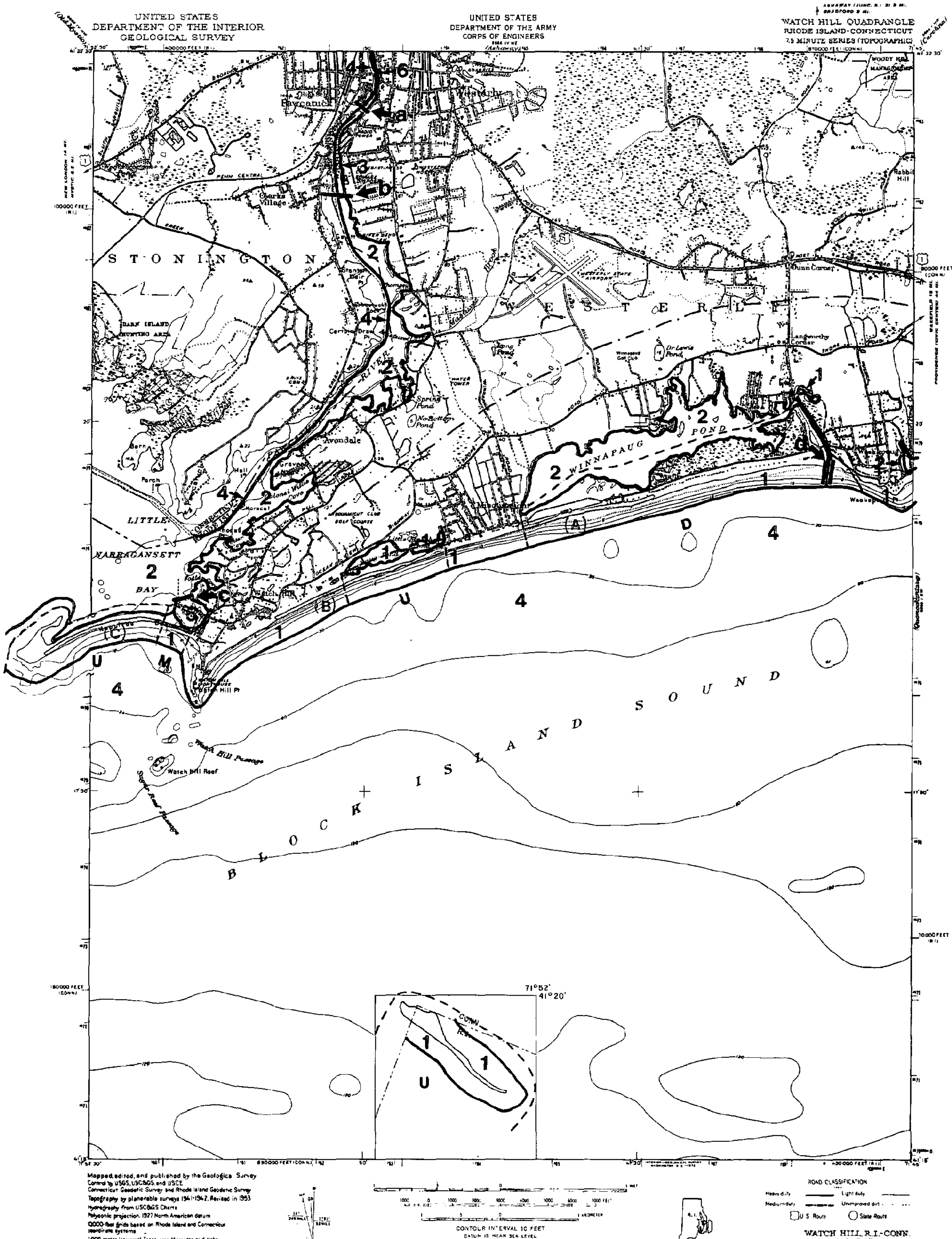
Watch Hill Quadrangle

a A straight line extension of the northern boundary of Cardone's Marina.

b A straight line extension of the south side of the industrially zoned area.

c A straight line across the entrance to Watch Hill Cove from an extension of the western side of Meadow Lane to the tip of the jetty on the north side of Napatree Beach.

d Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Winnipaug Pond.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
WATCH HILL QUADRANGLE
RHODE ISLAND-CONNECTICUT
7.5 MINUTE SERIES (TOPOGRAPHIC)
Pawcatuck
Westerly
Clarks Village
STONINGTON
WESTERLY
Avondale
Spring Pond
No Bottom Pond
Long Pond
Dr Lewis Pond
Winnapaug Golf Club
WINNAPAUG POND
Dunn Corner
Langworthy Corner
Weekapaug
LITTLE NARRAGANSETT BAY
Watch Hill Pt
Watch Hill Passage
Watch Hill Reef
BLOCK ISLAND SOUND
Rabbit Hill
BARN ISLAND HUNTING AREA
WESTERLY STATE AIRPORT
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES IN FEET—DATUM IS MEAN LOW WATER
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
ROAD CLASSIFICATION
QUADRANGLE LOCATION
WATCH HILL, R.I.-CONN.
1953
71°52'
41°20'
1
2
3
4
6
a
b
c
d
A
B
C
D
U
M

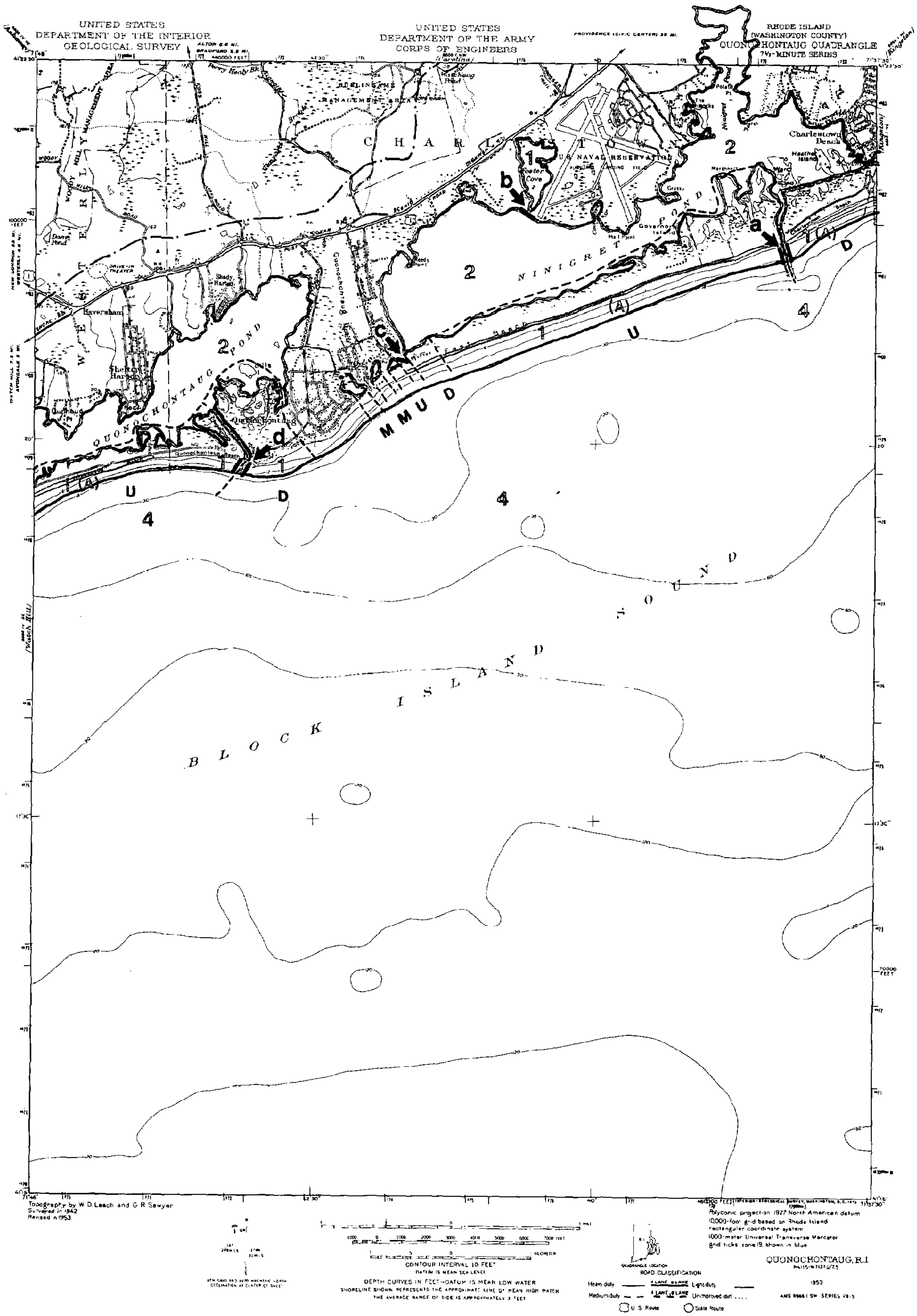
Quonochontaug Quadrangle

a Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Ninigret Pond.

b A straight line along the Ninigret Pond shoreline across the entrance to Foster Cove.

c A straight line along the west side of East Beach Road.

d Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Quonochontaug Pond.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
RHODE ISLAND
(WASHINGTON COUNTY)
QUONOCHONTAUG QUADRANGLE
7½-MINUTE SERIES
CHARLESTOWN
US NAVAL RESERVATION
Charlestown Beach
NINIGRET POND
QUONOCHONTAUG POND
Quonochontaug
Shelter Harbor
Haversham
Shady Harbor
B L O C K I S L A N D S O U N D
a
b
c
d
1
2
4
(A)
U
D
MMUD
Topography by W.D. Leach and G.R. Sawyer
Surveyed in 1942
Revised in 1953
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES IN FEET—DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 3 FEET
ROAD CLASSIFICATION
Heavy duty
Medium duty
Light duty
Unimproved dirt
U S Route
State Route
Polyconic projection. 1927 North American datum
10,000-foot grid based on Rhode Island rectangular coordinate system
1000-meter Universal Transverse Mercator grid ticks, zone 19, shown in blue
QUONOCHONTAUG, R.I.
1953

Kingston Quadrangle

a A straight line running south along the outside of the eastern jetty at the Point Judith Pond breachway.

b A line running generally southerly, following the outside of the western jetty and breakwater at the Point Judith Pond breachway and Harbor of Refuge.

c A straight line running generally north along the eastern side of the Point Judith Pond breachway, and extending into pond waters to a point where a perpendicular with the Port of Galilee bulkhead is a distance of 200 feet; thence turning generally northeasterly, then generally northwesterly, then generally northeasterly again, paralleling and maintaining the 200 foot distance from the bulkhead, to a point northwest of the northwest corner of the Galilee bulkhead; thence turning an angle generally to the southeast and running until it connects to the northwest corner of the Galilee bulkhead.

d A straight line running generally north along the western side of the Point Judith Pond breachway, and extending into pond waters to a point where a perpendicular with the Jerusalem shoreline is a distance of 200 feet. Thence turning generally north-northwesterly, maintaining the 200-foot distance from the shoreline, and extending to the end of state property. Thence turning a right angle to the west and running until it connects to the shoreline.

e A line along the eastern side of the bridge between Galilee and Great Island.

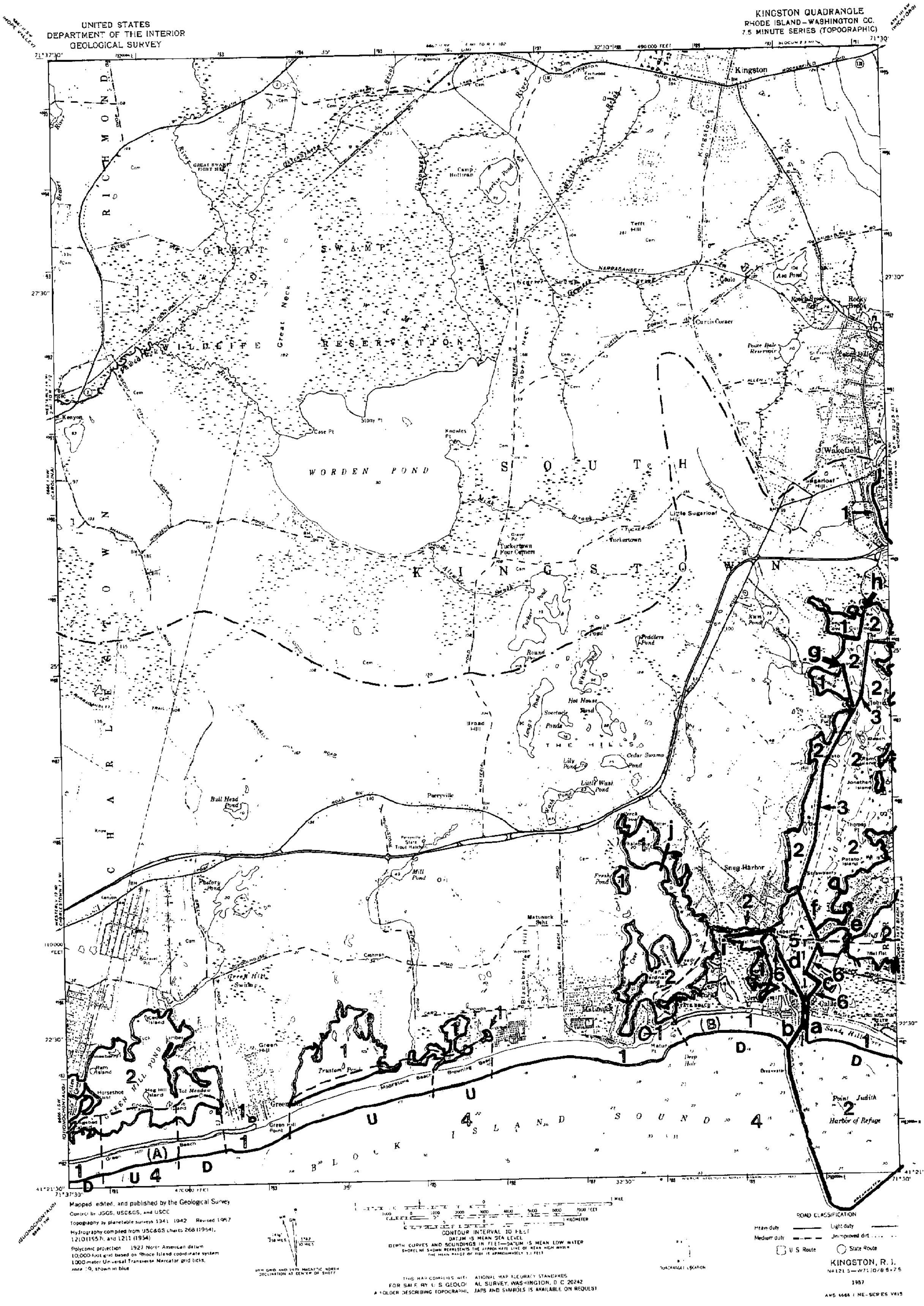
f A straight line running from the most western tip of Little Comfort Island to the most eastern tip of High Point.

g A straight line across Smelt Brook Cove from the eastern tip of Buttonwoods Point to the eastern tip of Crown Point.

h A line across Congdon Cove from the southern tip of the peninsula on the west side of Billington Cove to the southeastern tip of Cummock Island; thence turning due westerly until it touches the mainland on the south side of Congdon Cove.

i A straight line running generally westerly from the border between the RL80 and open-space zones on Gooseberry Island to the border between the open-space and commercial zones south of the Kenport Marina.

j A straight line running from a southern tip of land now or formerly of Collins/Bassett/Murray to the most easterly side of a small salt marsh on land now or formerly of Woodcock/ Roberton/McCall.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
KINGSTON QUADRANGLE
RHODE ISLAND-WASHINGTON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Kingston
RICHMOND
GREAT SWAMP
WILDLIFE RESERVATION
Great Neck
Camp Hoffman
Tefft Hill
NARRAGANSETT
Curtis Corner
Wakefield
Kenyon
WORDEN POND
SOUTH KINGSTOWN
CHARLESTOWN
Little Sugarloaf Hill
Tuckertown
Tuckertown Four Corners
Broad Hill
THE HILLS
Cedar Swamp Pond
Bull Head Pond
Perryville
Snug Harbor
Matunuck
Green Hill
Green Hill Pond
Trustom Pond
Moonstone Beach
Browning Beach
Point Judith
Harbor of Refuge
BLOCK ISLAND SOUND
Sand Hill
Galilee
(A)
(B)
U
D
1
2
3
4
5
6
a
b
c
d
e
f
g
h
j
Mapped, edited, and published by the Geological Survey
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
ROAD CLASSIFICATION
KINGSTON, R. I.
1957

Narragansett Pier Quadrangle

a A straight line from the southern end of Maple Avenue to the end of the large wharf at Beaverhead.

b A straight line from Southwest Point to the tip of Shore Point.

c A straight line extension of the south side of Bonnet Shores Road.

d A straight line across the entrance to Pettaquamscutt Cove from the northernmost tip of land at Little Neck West of the Sprague Bridge, thence generally northwesterly, touching the northeastern border of the wetland called "sedge beds", thence continuing straight to where it meets land on the northern part of the cove entrance.

e A straight line across the entrance to the Narrow River from the south side of Clump Rocks to the tip of the Narragansett Beach barrier spit.

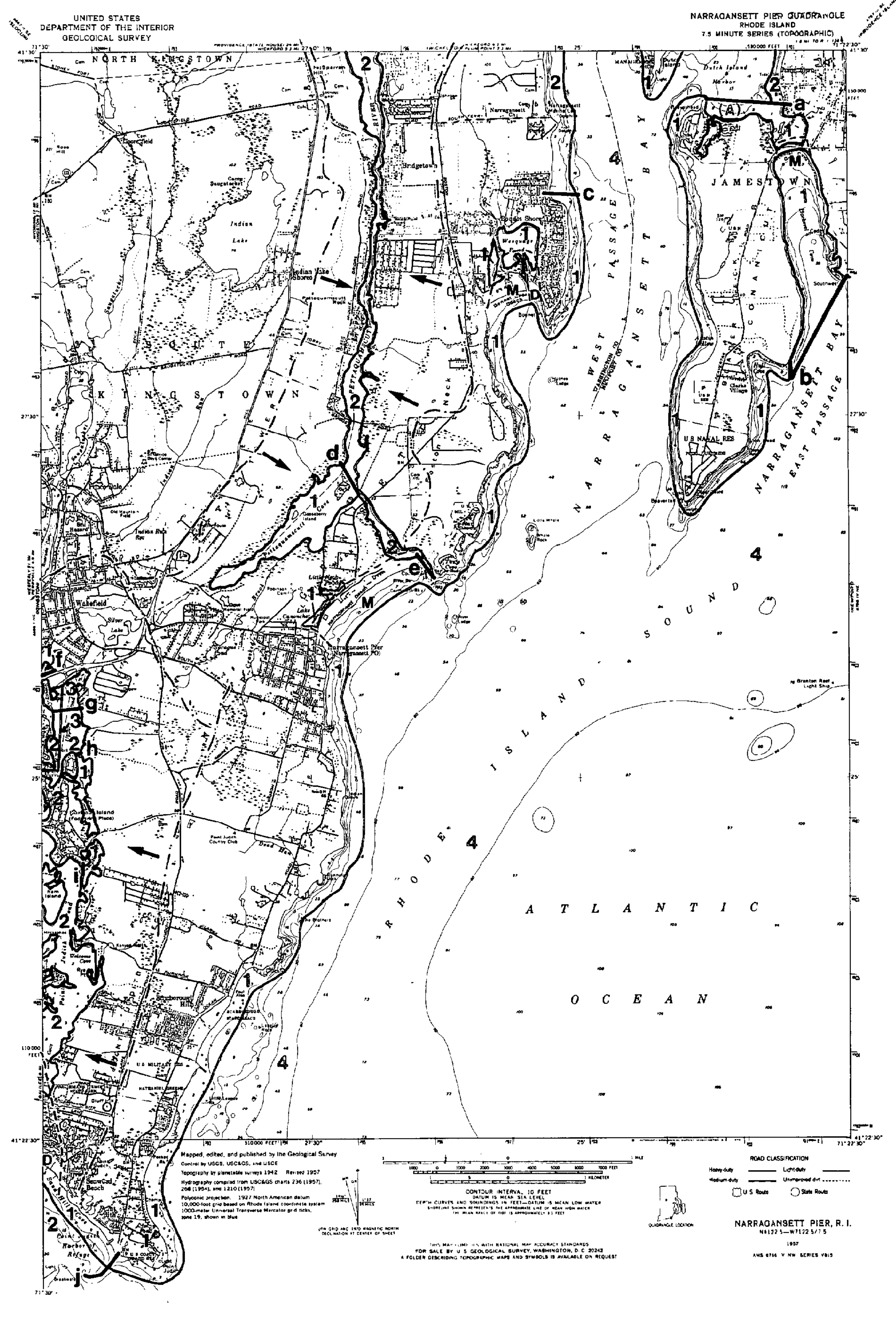
f A line across the northernmost side of the Route 1 bridge.

g A straight line running from west to east through the center of Nun buoy #24.

h A straight line across the inlet to Long Cove at its most narrow point.

i A straight line across the inlet to Champlin Cove from the tip of Cedar Point to the southernmost point on Harbor Island.

j A line along the outside of the Harbor of Refuge breakwater.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
NARRAGANSETT PIER QUADRANGLE
RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
NORTH KINGSTOWN
SOUTH KINGSTOWN
JAMESTOWN
Bridgetown
Indian Lake
Wakefield
Silver Lake
Narragansett Pier
WEST PASSAGE
NARRAGANSETT BAY
EAST PASSAGE
RHODE ISLAND SOUND
ATLANTIC
OCEAN
U S NAVAL RES
U S MILITARY RES
Point Judith Country Club
Mapped, edited, and published by the Geological Survey
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
ROAD CLASSIFICATION
NARRAGANSETT PIER, R. I.
1957
FOR SALE BY U S GEOLOGICAL SURVEY, WASHINGTON, D C 20242
1
2
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M
D

Wickford Quadrangle

a A line along the east bulkhead wall in the small embayment on the south side of the Allen Harbor entrance channel to where it meets the opposite shore.

b,c Boundaries were removed prior to Program adoption.

d A straight line extension from the end of the fence separating former Navy lands from private lands, extending offshore 2,000 feet, then turning generally easterly and running to a point where it meets the southern side of the Navy channel.

e A line along the western side of the breakwater from Sauga Point, running across the entrance channel to Wickford Harbor and along the western side of the breakwater from Poplar Point.

f A straight line from the base of the breakwater at Sauga Point to the eastern tip of Cornelius Island.

g A straight line across the entrance to Wickford Cove from the tip of Big Rock Point to the tip of the northern peninsula at the end of West Main Street.

h A line along the western side of the bridge on Brown Street.

i A line along the south side of Hussey Bridge.

j A straight line across the southwestern side of the old railroad causeway.

k A straight line from the northeast side of Rabbit Island to the tip of Calf Neck.

l A straight line from the southern tip of Rabbit Island to the western side of the launching ramp at Long Point.

m A straight line extension of the northeast side of Enfield Avenue.

n A straight line extension of Pleasant Street

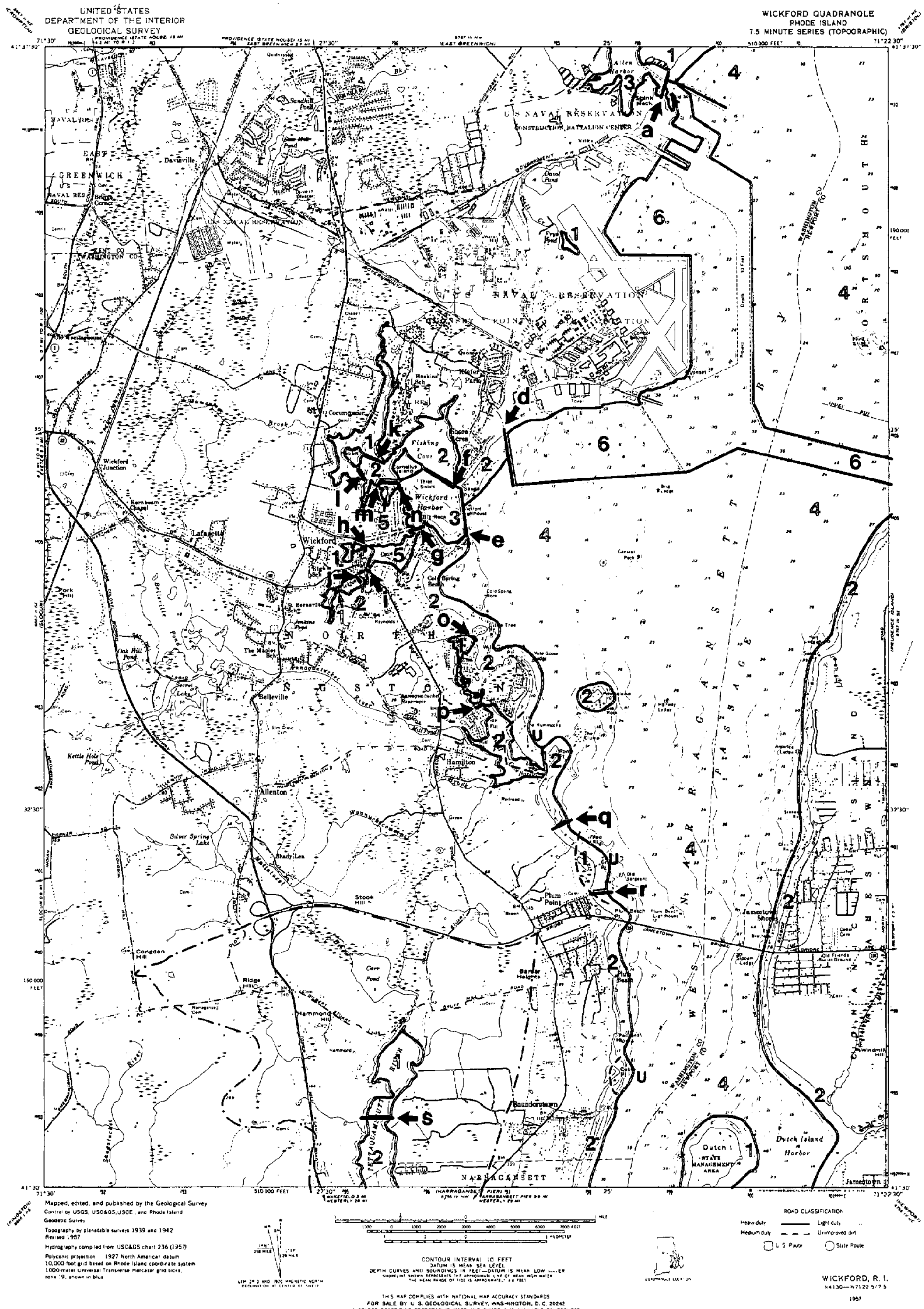
o A straight line across the entrance to Duck Cove at its narrowest point from the northern side of the small peninsula, running generally southeasterly to where it meets the opposite shore on Little Tree Point.

p A straight line along the north side of Waldron Avenue.

q A straight line along the south side of the industrially zoned land.

r A straight line extension of the boundary between the RL and RH zones.

s A straight line extension of the southern border of the open-space zone on the east side of the Pettaquamscutt River.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WICKFORD QUADRANGLE
RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
U S NAVAL RESERVATION
NORTH KINGSTOWN
NARRAGANSETT
WEST PASSAGE
NARRAGANSETT BAY
Wickford
Wickford Harbor
Dutch Island Harbor
Jamestown
Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, USCE, and Rhode Island Geodetic Survey
Topography by planetable surveys 1939 and 1942
Revised 1957
Hydrography compiled from USC&GS chart 236 (1957)
Polyconic projection 1927 North American datum
10,000-foot grid based on Rhode Island coordinate system
1000-meter Universal Transverse Mercator grid ticks, zone 19, shown in blue
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
ROAD CLASSIFICATION
Heavy-duty
Light duty
Medium duty
Unimproved dirt
U. S. Route
State Route
WICKFORD, R. I.
N4130—W7122.5/7.5
1957
AMS 6767 III SW—SERIES V815

East Greenwich Quadrangle

a A straight line extension from the south side of a launching ramp facility on the northern side of Passeonkquis Cove.

b A straight line running from a point of land on the south side of Occupessatuxet Cove to the tip of the peninsula on the east side of the cove.

c A straight line from the northern side of the end of Randall Street to the base of the easternmost groin at Oakland Beach.

d A straight line from the base of the westernmost groin at Oakland Beach to the base of the easternmost groin on Buttonwood Point.

e A straight line from the tip of Cedar Tree Point to the south side of the breakwater at Folly's Landing.

f A straight line from the northern border of the commercially zoned area to the tip of Long Point at Goddard Park.

g A straight line running due east from the south side of the sewage treatment plant property across Greenwich Cove to where it intersects with land at Goddard State Park.

h A straight line extending northerly from the eastern border of Goddard State Park.

i A straight line along the western side of Beachwood Drive.

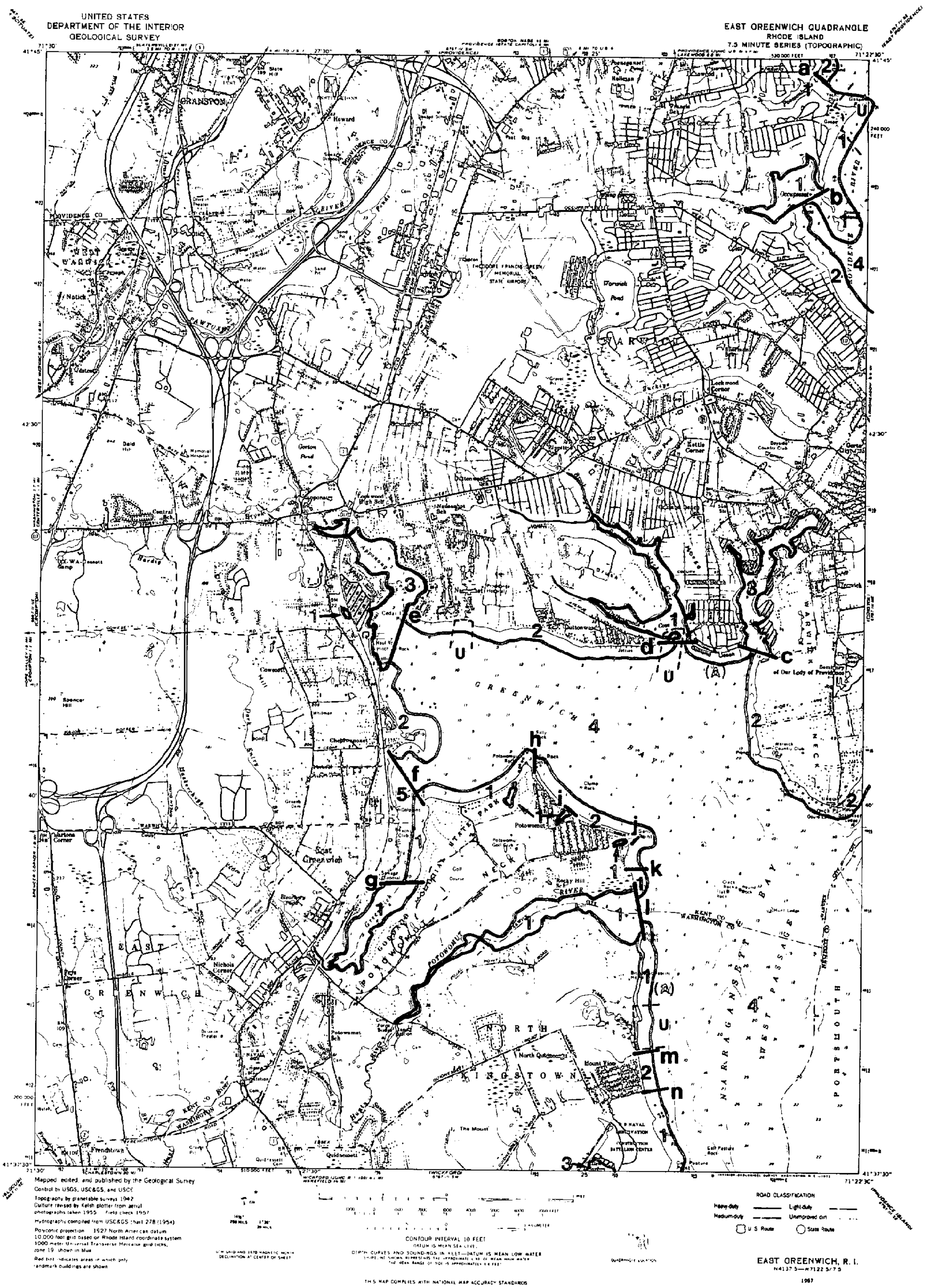
j A straight line across the creek entrance south of Sandy Point.

k A straight line from the end of Bradford Avenue.

l A straight line from the southeast tip of Marsh Point to the tip of Pojac Point.

m A straight line from the northern end of Narragansett Street.

n A straight line from the northern boundary of Navy property.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
EAST GREENWICH QUADRANGLE
RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
CRANSTON
Warwick Pond
Lockwood Corner
Kettle Corner
Gorton Pond
Apponaug
GREENWICH BAY
Potowomut
East Greenwich
Nichols Corner
POTOWOMUT
NORTH KINGSTOWN
North Quidnessett
Mount View
Frenchtown
Quidnessett
NARRAGANSETT BAY
WEST PASSAGE
PORTSMOUTH
WARWICK NECK
Seminary of Our Lady of Providence
Spencer Hill
Rocky Hill
Mapped, edited, and published by the Geological Survey
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
ROAD CLASSIFICATION
EAST GREENWICH, R. I.
N4137.5—W7122.5/7.5
1957
AMS 6767 III NW—SERIES V815
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u
(A)

Providence Quadrangle

a The base of the falls at the city of Pawtucket.

b A straight line running generally WNW from the Union Oil property boundary south of Bold Point in East Providence to the westerly boundary of India Point Park in Providence.

c The western edge of the former railroad causeway.

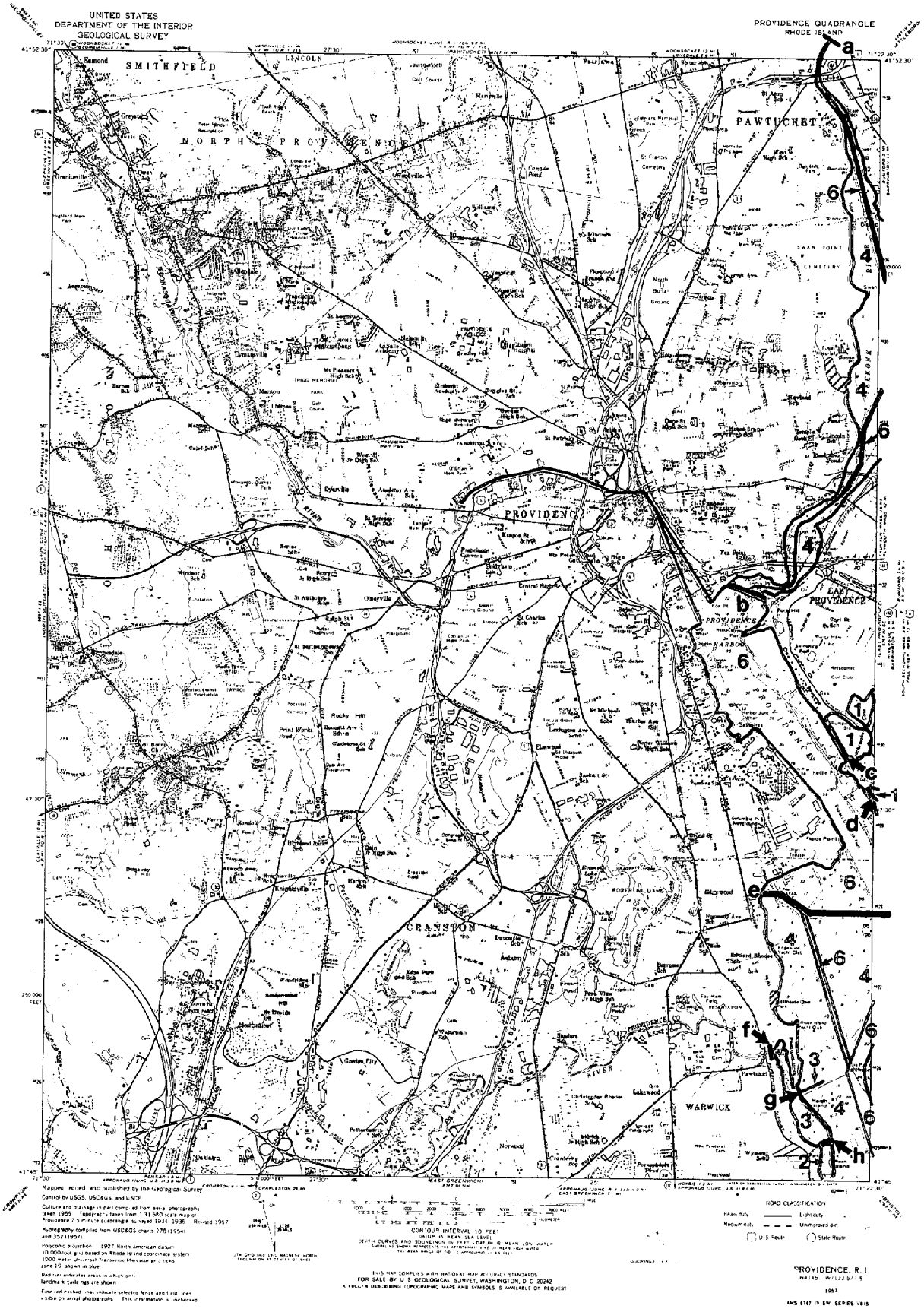
d The western edge of the former railroad causeway.

e From the southern side of the Port Edgewood breakwater, thence easterly to the dolphin on the east side of dredged access channel to Fields Point, then southeast to the southern boundary of the Mobil Oil Company property in East Providence.

f The base of the falls at the Pawtuxet River.

g A straight line running northwesterly from the easterly side of the Pawtuxet Cove breakwater to the tip of Pawtuxet Neck.

h The northern side of the rubble-mound connector running easterly from the northeast tip of Salter Grove to the Pawtuxet Cove breakwater.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
PROVIDENCE QUADRANGLE
RHODE ISLAND
SMITHFIELD
LINCOLN
NORTH PROVIDENCE
PAWTUCKET
PROVIDENCE
EAST PROVIDENCE
CRANSTON
WARWICK
a
b
c
d
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h
6
4
1
3
2
Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and USCE
Hydrography compiled from USC&GS charts 278 (1954) and 352 (1957)
Polyconic projection. 1927 North American datum
10,000-foot grid based on Rhode Island coordinate system
1000-meter Universal Transverse Mercator grid ticks
zone 19, shown in blue
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
ROAD CLASSIFICATION
Heavy duty
Medium duty
Light duty
Unimproved dirt
U.S. Route
State Route
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
PROVIDENCE, R. I.
1957
AMS 8767 IV SW SERIES V815

East Providence Quadrangle

a The western edge of the former railroad causeway.

b A straight line running generally westerly from the southern end of the Mobil Oil Company property to the dolphin on the east side of the dredged access channel to Fields Point, thence to the south side of the Port Edgewood breakwater in Providence.

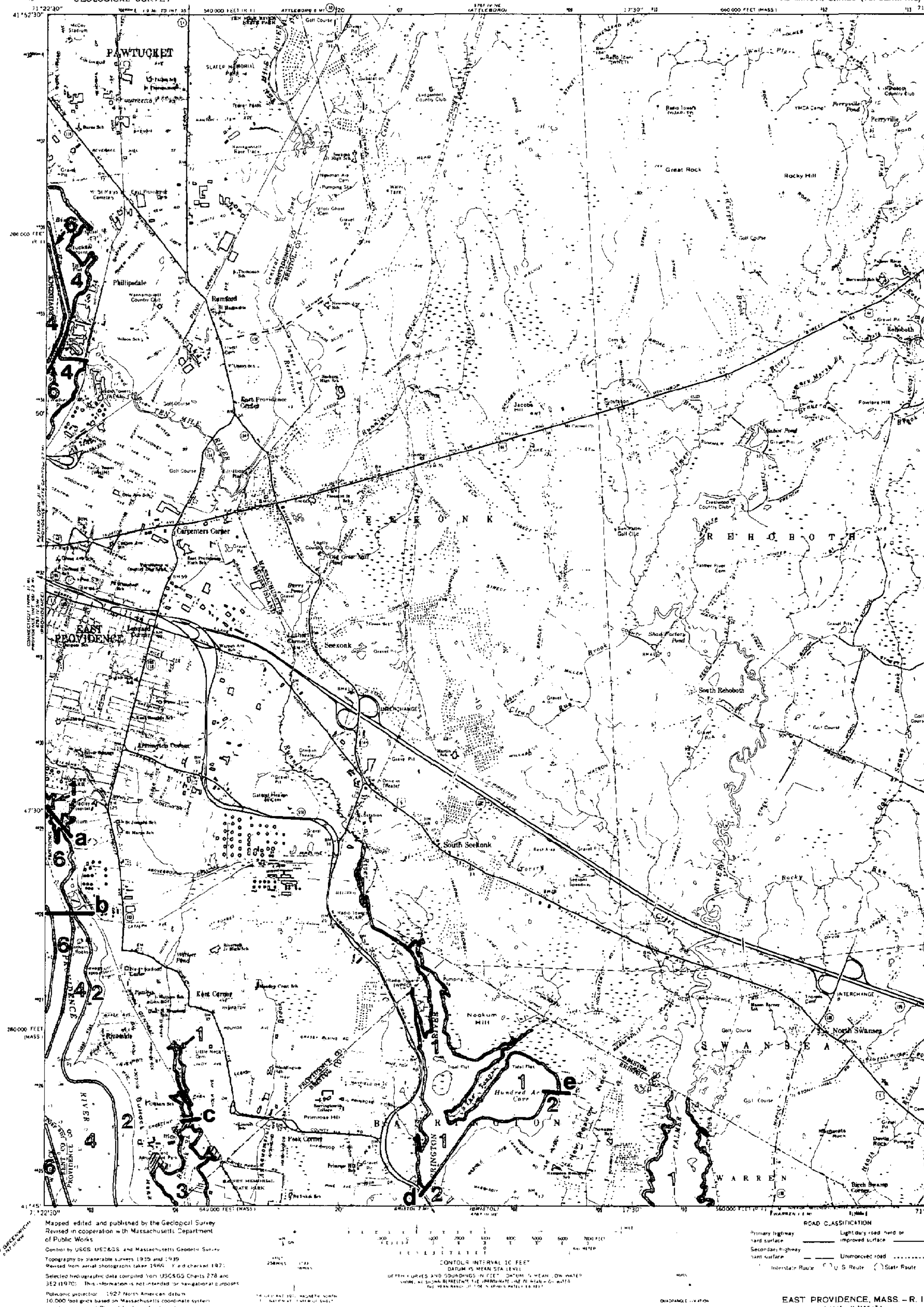
c The northern side of the culverts and breachways under Crescent View Avenue.

d The tip of the small peninsula at the southern side of Walker Farm, Barrington.

e A straight line extension of George Finnerty Road.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

EAST PROVIDENCE QUADRANGLE
MASSACHUSETTS - RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey
Revised in cooperation with Massachusetts Department of Public Works

Control by USGS, USC&GS, and Massachusetts Geodetic Survey

Topography by planetable surveys 1935 and 1939
Revised from aerial photographs taken 1969. Field checked 1971

Selected hydrographic data compiled from USC&GS Charts 278 and 352 (1970). This information is not intended for navigational purposes

Polyconic projection. 1927 North American datum
10,000-foot grids based on Massachusetts coordinate system, mainland zone, and Rhode Island coordinate system
1000-meter Universal Transverse Mercator grid ticks, zone 19, shown in blue

Red tint indicates areas in which only landmark buildings are shown

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
Primary highway, hard surface
Light-duty road, hard or improved surface
Secondary highway, hard surface
Unimproved road
Interstate Route
U. S. Route
State Route

EAST PROVIDENCE, MASS. – R. I.
N4145 – W7115/7.5

1971

AMS 6767 IV SE – SERIES V814

Bristol Quadrangle

a A straight line along the southern bulkhead wall of Lavin's Marina, then straight across the channel to where it meets the end of Willow Way.

b A line from the southeastern end of Blanding Avenue running generally southeasterly across the channel to where it meets the end of Willow Way.

c A line along the edge of a salt marsh at the end of Appian Way.

d The outlet of a small pond and stream south of Beach Road.

e The northwestern border of the salt marsh.

f A straight line extension of Adam's Point Road.

g A straight line extension of the south side of Ferry Lane.

h Along the southern side of the old railroad causeway.

i Along the westerly side of the Barrington River at the tidal creek entrance.

j A straight line from the north side of the end of Stanley Avenue running due easterly to a point of land on the opposite shore.

k Along the pipeline crossing of Belcher Cove.

l Along the southern side of the old railway causeway.

m A straight line extension of the south side of Company Street.

n At the southern end of the industrially zoned area.

o At the outlet of a small stream south of Locust Street.

p At the Bristol/Warren town line.

q Along the inside of the new bridge.

r A straight line from the boundary between RM20 and RM40 zones on Poppasquash Neck to the boundary between the industrial and commercial zones on the Bristol waterfront.

s The northern side of the bridge or culvert to Mill Pond.

t The eastern side of the bridge over Silver Creek.

u A straight line extension of Fairview Avenue.

v The eastern side of the Mount Hope Bridge.

w A straight line extending northerly from the boundary of Lots 8 and 9, Town Map 17.

x A straight line extending easterly from a point 50 feet north of the edge of the adjacent marsh.

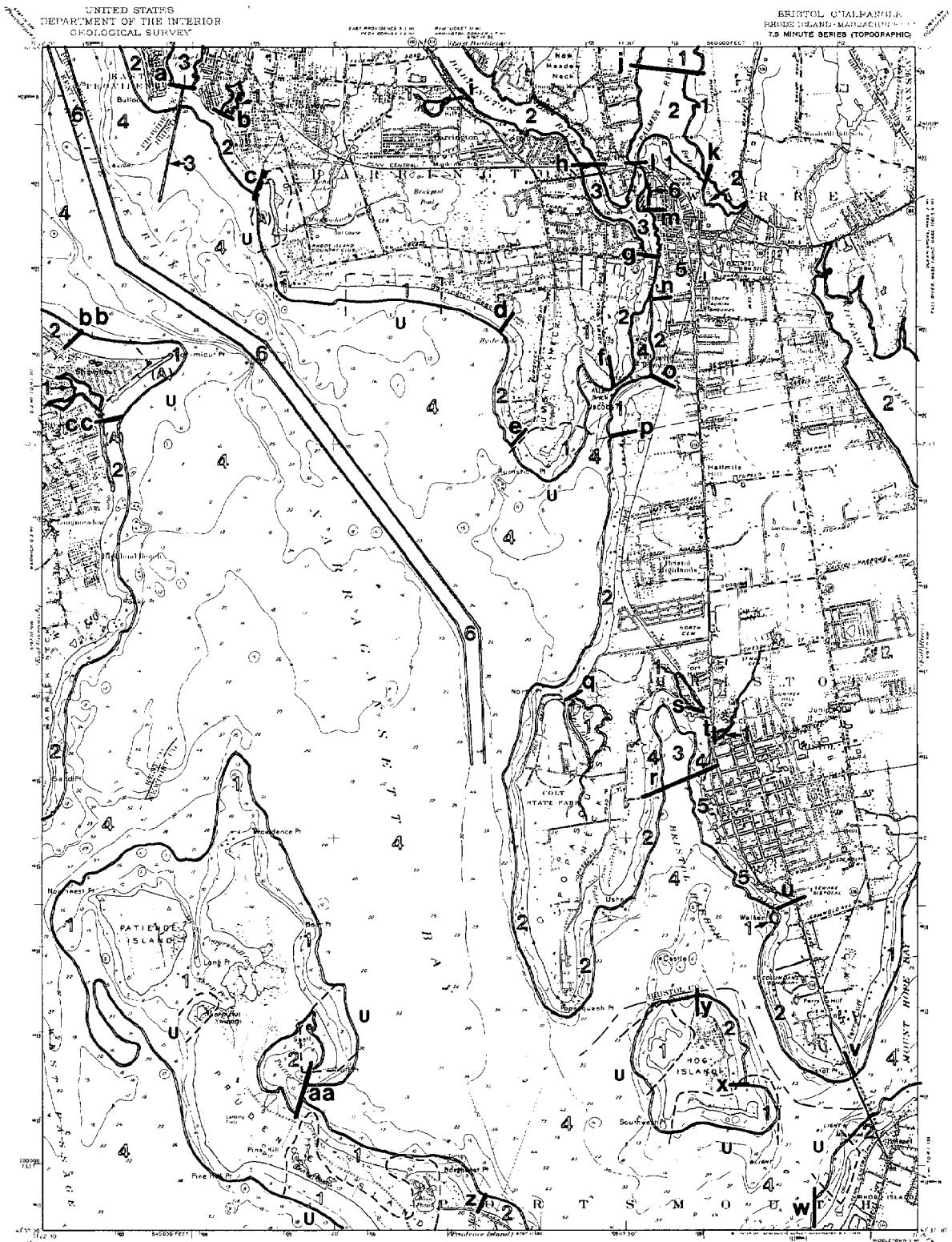
y A line extending northerly from the northern tip of Hog Island.

z The outlet of Mill Creek.

aa A straight line from the tip of Gull Point running generally south-southwesterly, to the boundary between state and private lands on Prudence Neck. (The water use classification boundary around the north end of Prudence Island and Patience Island follows the 18-foot bathymetric contour line. This is consistent with the boundary of the area protected by provisions of the federal Estuarine Sanctuary Program.)

bb A straight line extension of Talcott Street.

cc A straight line extension of Lippitt Avenue.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
BRISTOL QUADRANGLE
RHODE ISLAND-MASSACHUSETTS
7.5 MINUTE SERIES (TOPOGRAPHIC)
PATIENCE ISLAND
HOG ISLAND
COLT STATE PARK
Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography by plane table surveys 1939 Revised 1955
Polyconic projection. 1927 North American datum
10,000-foot grid based on Rhode Island coordinate system
Hydrography from USC&GS Chart 354 dated 1952
1000-meter Universal Transverse Mercator grid ticks
zone 19, shown in blue
Revisions shown in purple compiled from aerial photographs taken 1970. This information not field checked
Purple land indicates extensions of urban areas
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS 4 FEET
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
QUADRANGLE LOCATION
ROAD CLASSIFICATION
Heavy duty
Light duty
Medium duty
Unimproved dirt
U.S. Route
State Route
BRISTOL, R.I.-MASS.
1955
PHOTOREVISED 1970

Prudence Island Quadrangle

a A line perpendicular to the shore from the southern side of the rocky extension north of Prudence Park.

b A line from the outlet of a small, westerly flowing stream south of Prudence Park and north of Crow's Swamp.

c A straight line extension of the boundary between public state park lands and privately owned lands.

d A line connecting the westernmost points of land bordering the entrance into the Bend Boat Basin.

e A line connecting to the southernmost border of D, above, and extending westerly 50 feet from shore; thence generally southerly, maintaining a 50-foot distance from shore and the outer perimeter of the wharves and piers of the Melville industrial facility; thence easterly to connect land at a point 50 feet south of the southernmost pier.

f The northern border of the rubble-mound breakwater.

g A line extending out to meet the tip of the rubble-mound breakwater from the northernmost tip of Coddington Point.

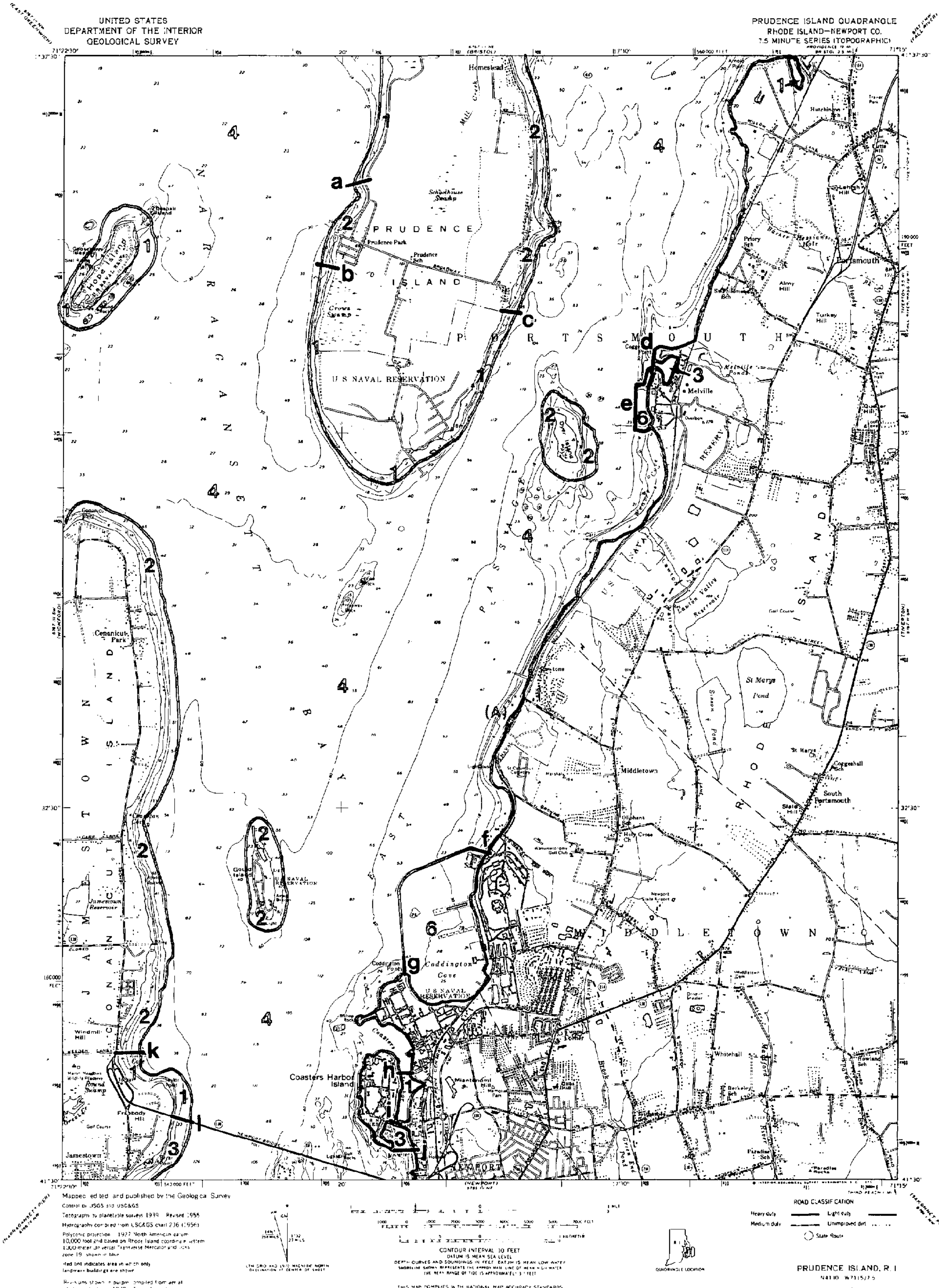
h A line bordering the southermost side of the northern bridge connecting Coaster's Harbor Island to Aquidneck Island.

i A line bordering the northern side of the bridge on Training Station Road which connects Coaster's Harbor Island to Aquidneck Island.

j A straight line extending from the southern tip of Coaster's Harbor Island to a point where it meets with a straight line extension of an unnamed road.

k A straight line extension from the southern side of Weeden Lane.

l A line bordering the southern side of the Newport Bridge.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
PRUDENCE ISLAND QUADRANGLE
RHODE ISLAND—NEWPORT CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
Homestead
PRUDENCE
ISLAND
Prudence Park
U S NAVAL RESERVATION
PORTSMOUTH
Melville
Portsmouth
NARRAGANSETT BAY
EAST PASSAGE
Conanicut Park
JAMESTOWN
CONANICUT ISLAND
Jamestown Reservoir
Windmill Hill
Jamestown
Gould Island
NAVAL RESERVATION
Middletown
St Marys Pond
MIDDLETOWN
RHODE ISLAND
Coddington Cove
U.S NAVAL RESERVATION
Coasters Harbor Island
Whitehall
a
b
c
d
e
f
g
h
k
l
(A)
1
2
3
4
5
6
Mapped, edited, and published by the Geological Survey
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Medium-duty
Unimproved dirt
State Route
QUADRANGLE LOCATION
PRUDENCE ISLAND, R. I.
1955
PHOTOREVISED 1970
AMS 6767 III SE SERIES V815

Fall River Quadrangle

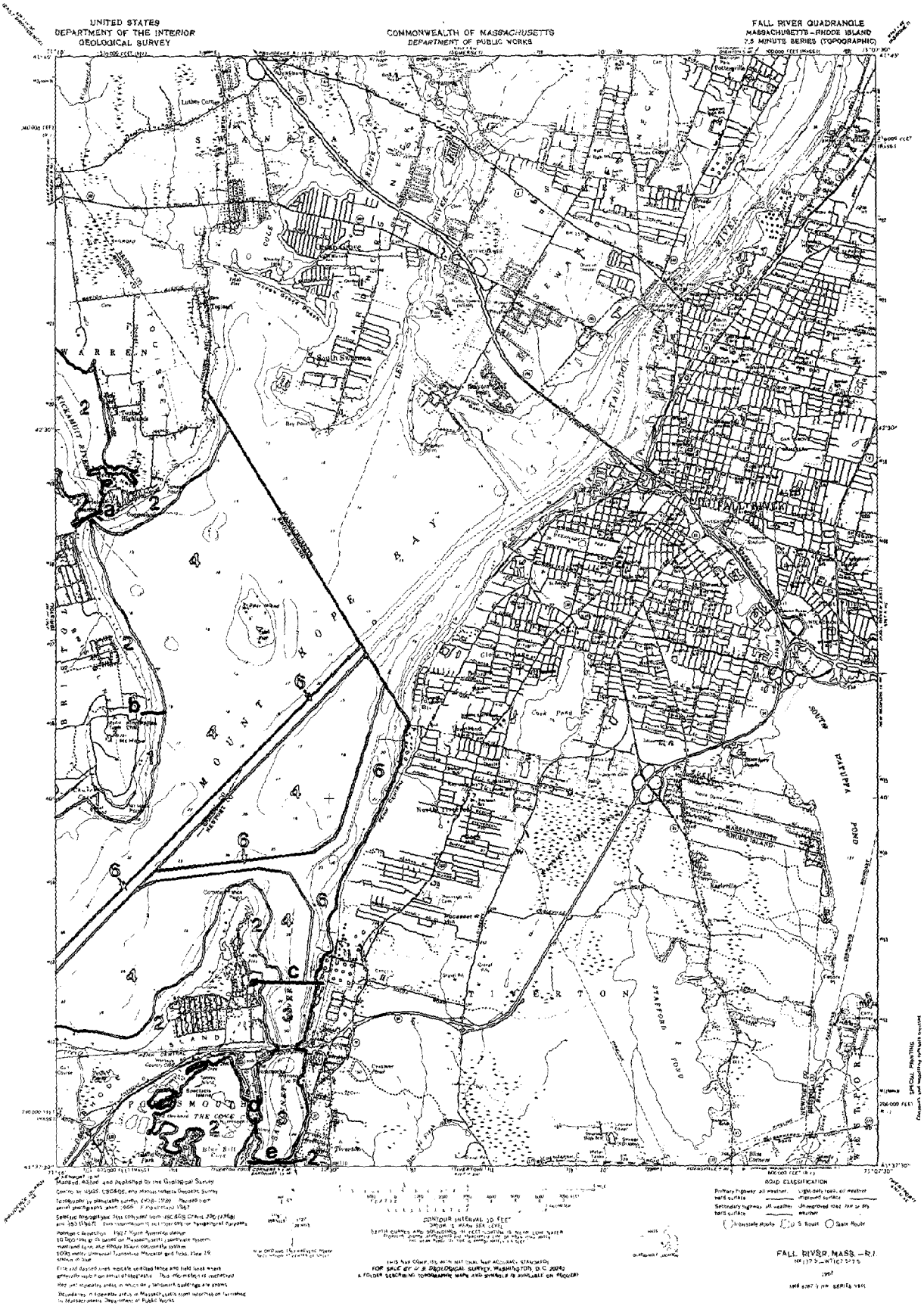
a A straight line from the tip of the peninsula at end of Narrows Road in Bristol to the tip of the peninsula near the end of Brownell Street in Warren.

b A straight line extension along the south side of the large pier south of the Haffenreffer Museum.

c A straight line from the southern border of the industrially zoned area in Tiverton to the tip of the peninsula on the north side of Brewer's Marina in Portsmouth.

d A straight line along the west side of the bridge connecting Point Road and Hummock Avenue at the entrance to Blue Bill Cove.

e A straight line connecting the north sides of the abutments of the former Old Stone Bridge.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
FALL RIVER QUADRANGLE
MASSACHUSETTS—RHODE ISLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
MOUNT HOPE BAY
TIVERTON
PORTSMOUTH
SOMERSET
SWANSEA
WARREN
FALL RIVER
SOUTH WATUPPA POND
STAFFORD POND
ROAD CLASSIFICATION
CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
FALL RIVER, MASS.—R.I.
1967

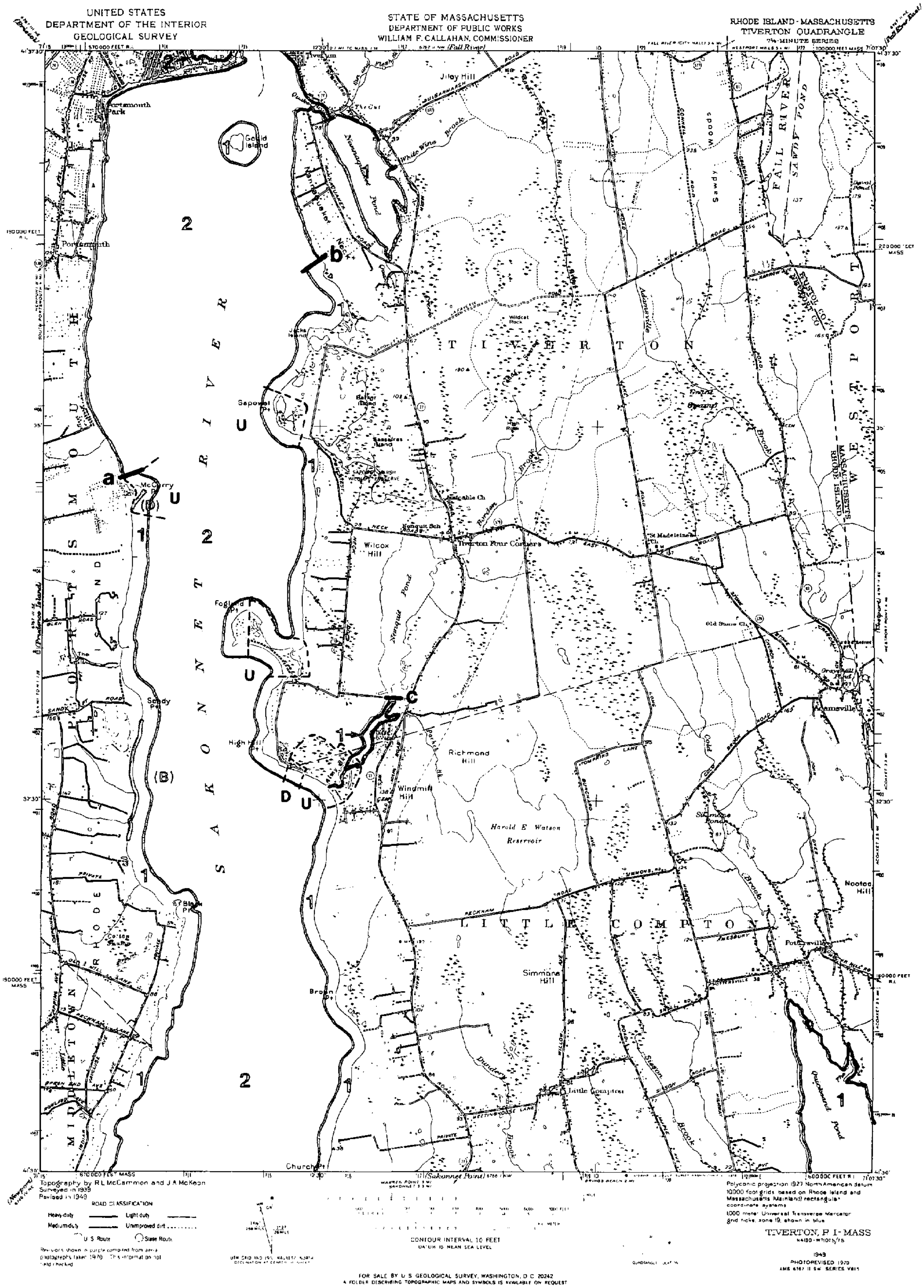
Tiverton Quadrangle

a A straight line extension of Robin Road.

b A straight line extension of the south side of Island View Road.

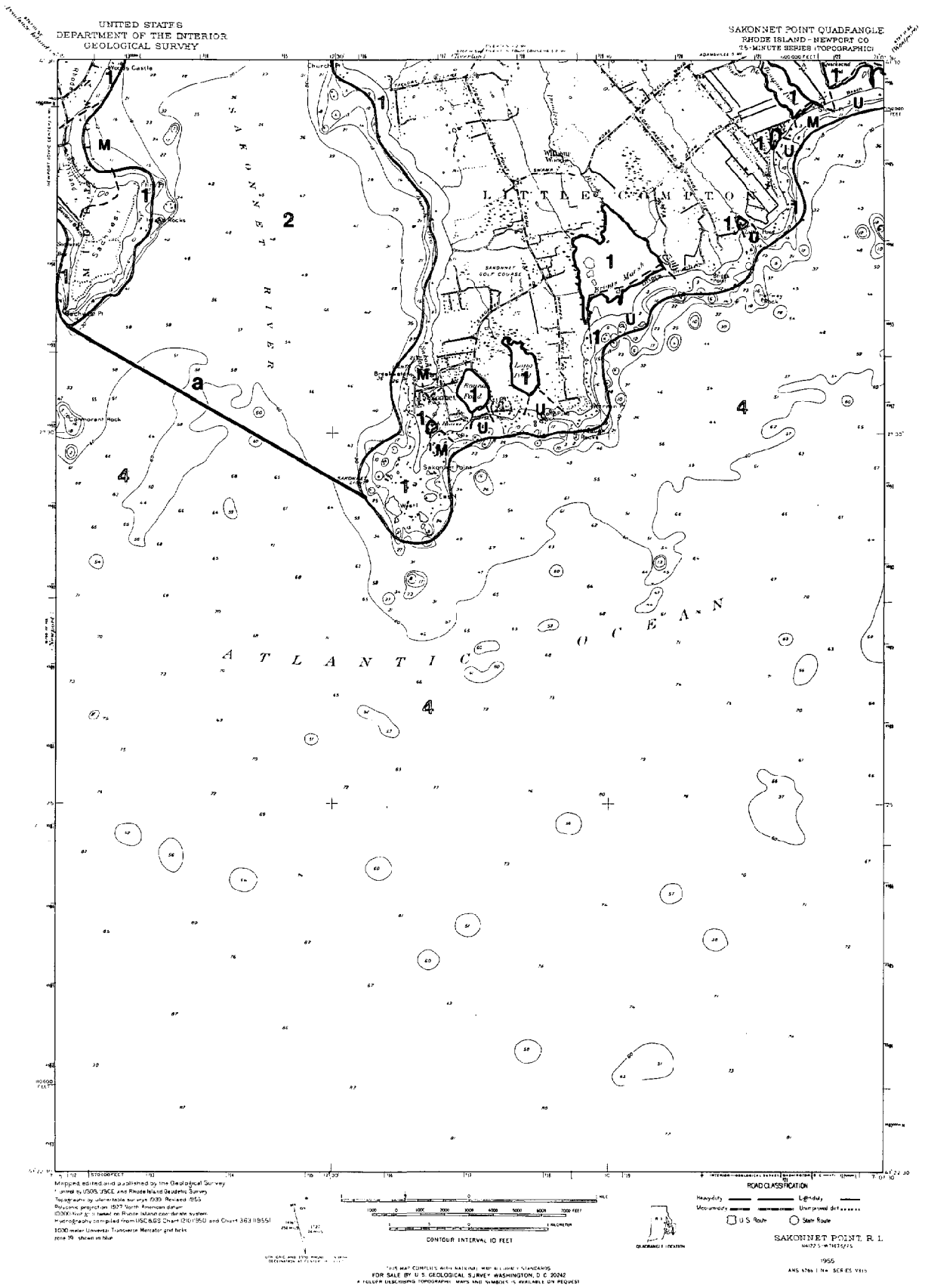
c A straight line at the north side of the Nonquit Pond Dam.

d A straight line along the south side of the Nannaquaket Pond Bridge.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS
WILLIAM F. CALLAHAN, COMMISSIONER
RHODE ISLAND - MASSACHUSETTS
TIVERTON QUADRANGLE
7.5-MINUTE SERIES
Portsmouth Park
Gould Island
Portsmouth
Jilsy Hill
The Cut
Nonquit Pond
Sawdy Pond
Fall River
SAKONNET RIVER
TIVERTON
Sapowet Pt
Seapowet Pt
McCorry Pt
Tiverton Four Corners
Wilcox Hill
Nonquit Pond
St Madeleine's
Fogland Pt
Old Stone Ch
Sandy Pt
High Hill
Richmond Hill
Windmill Hill
Adamsville
Harold E Watson Reservoir
Simmons Pond
Nootoc Hill
LITTLE COMPTON
Simmons Hill
Pottersville
Brown Pt
Little Compton
Quicksand Pond
Church Pt
WESTPORT
PORTSMOUTH
RHODE ISLAND
MIDDLETOWN
a
b
c
U
D
(B)
1
2
Topography by R L McCammon and J A McKeon
Surveyed in 1939
Revised in 1949
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Medium-duty
Unimproved dirt
U.S. Route
State Route
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
TIVERTON, R.I.-MASS.
1949
PHOTOREVISED 1970

Sakonnet Point Quadrangle

a A straight line across the entrance to the Sakonnet River from the tip of Sachuest Point to the southern tip of West Island near Sakonnet Point.

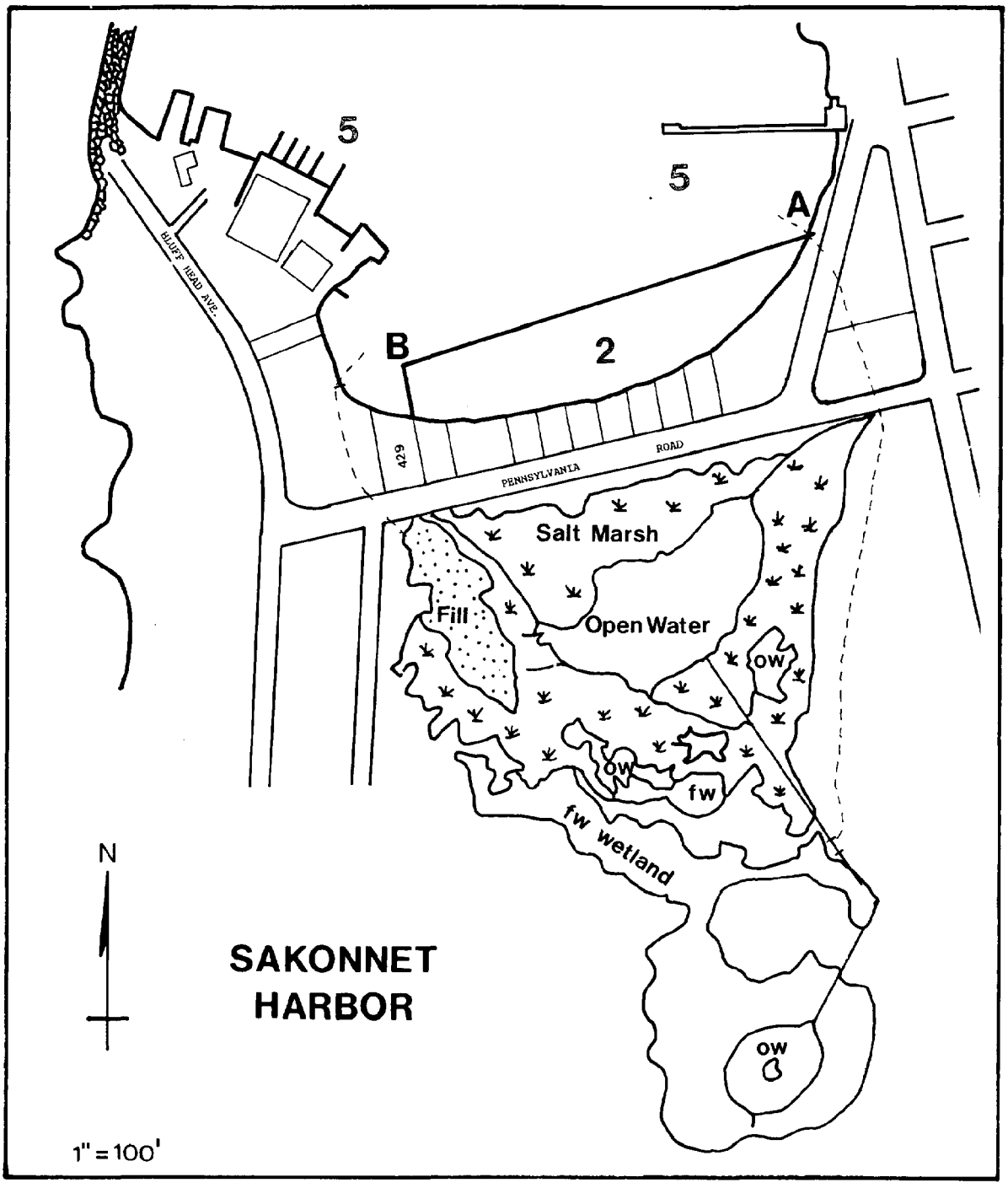

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
SAKONNET POINT QUADRANGLE
RHODE ISLAND - NEWPORT CO
7.5-MINUTE SERIES (TOPOGRAPHIC)
SAKONNET RIVER
LITTLE COMPTON
ATLANTIC OCEAN
Mapped, edited, and published by the Geological Survey
Control by USGS, USCE, and Rhode Island Geodetic Survey
Topography by planetable surveys 1939. Revised 1955
Polyconic projection 1927 North American datum
10,000-foot grid based on Rhode Island coordinate system
Hydrography compiled from USC&GS Chart 210 (1950) and Chart 363 (1955)
1000-meter Universal Transverse Mercator grid ticks
zone 19, shown in blue
CONTOUR INTERVAL 10 FEET
ROAD CLASSIFICATION
Heavy duty
Light duty
Medium duty
Unimproved dirt
U.S. Route
State Route
SAKONNET POINT, R. I.
1955
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242

Sakonnet Point Quadrangle:

Sakonnet Harbor

1. The water area immediately adjacent to the barrier beach, starting at Point A (the northeast edge of Lot 385 where the eastern boundary of the barrier beach, identified by Dr. Boothroyd, intersects with the shore) then extending toward the western shore boundary of the barrier beach designated by Dr. Boothroyd to Point B (where a line drawn in a northerly direction as an extension of the eastern boundary of Lot 429 forms an intersect) be designated as Type 2.

2. The remainder of the water area in Sakonnet Harbor shall be designated Type 5.


5
5
A
B
2
BLUFF ROAD AVE.
429
PENNSYLVANIA ROAD
Salt Marsh
Fill
Open Water
ow
ow
fw
fw wetland
ow
N
SAKONNET HARBOR
1" = 100'

Newport Quadrangle

a A line along the southern side of the Newport Bridge

b A line along the northern side of the causeway to Goat Island

c A straight line commencing in the southeast corner of Newport Harbor, running generally northwesterly through the so-called "Spindle marker," to the point where it meets the edge of the federally established and maintained anchorage area, then generally northerly along the eastern side of the anchorage area, thence westerly to the southern boundary of the Port of Call Marina on Goat Island.

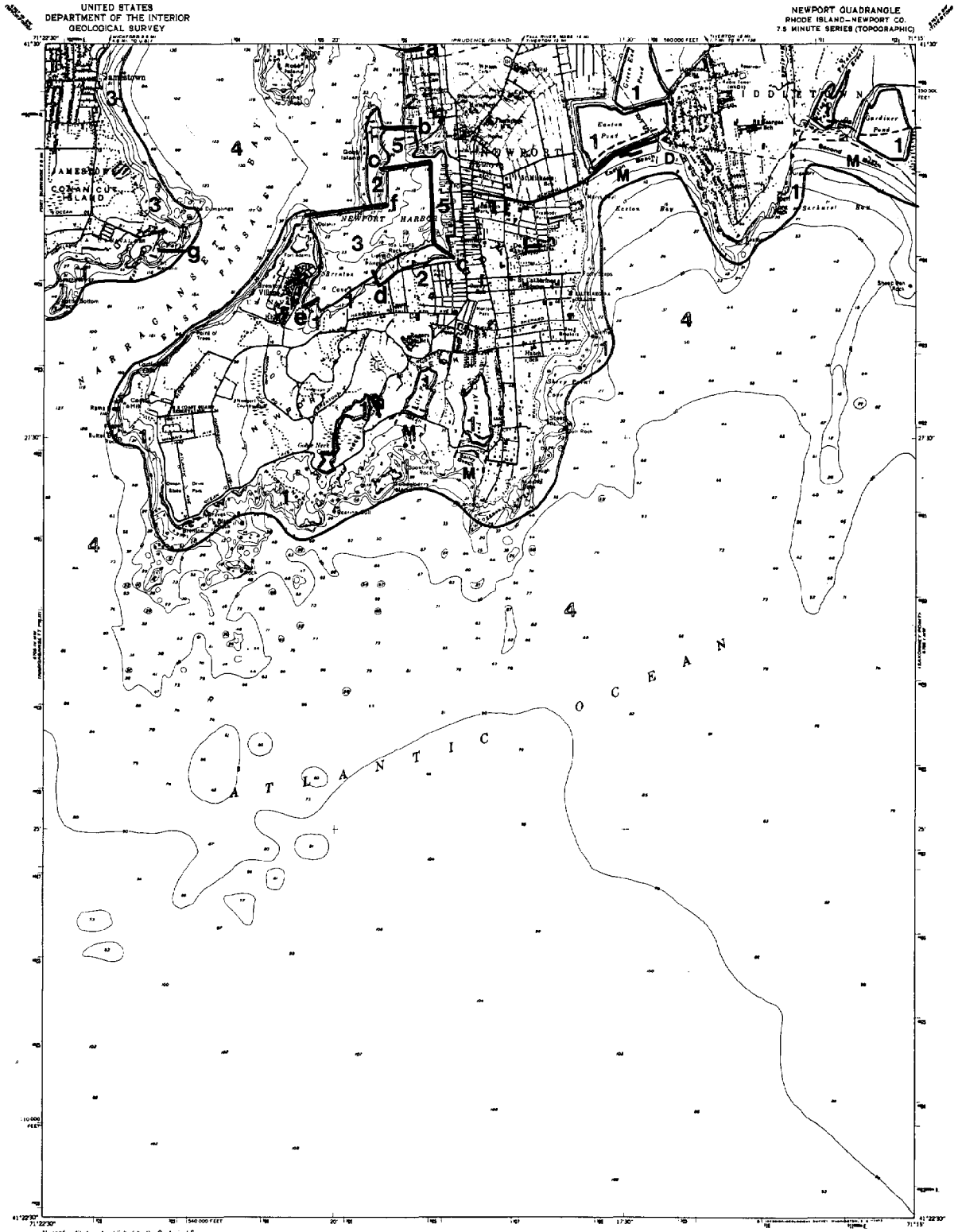
d A straight line extension from shore along the western side of the pier.

e A straight line extension from shore along the southern side of the state-owned boat launching ramp.

f A straight line extension from the northeastern tip of the Fort Adams anchorage basin easterly to the southern light on Goat Island.

g A straight line from shore along the southern side of the docking area at Fort Cove.

h A line along the western side of the breakwater near Ida Lewis Rock. Water area bounded by lines d and h to become Type 3 waters.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
NEWPORT QUADRANGLE
RHODE ISLAND–NEWPORT CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
NARRAGANSETT BAY
NEWPORT HARBOR
ATLANTIC OCEAN
Mapped, edited, and published by the Geological Survey
Control by USC&GS and USCE
Topography by planetable surveys 1939. Revised 1957
Hydrography compiled from USC&GS charts 336 and 1210 (1957)
Polyconic projection. 1927 North American datum
10,000-foot grid based on Rhode Island coordinate system,
1000-meter Universal Transverse Mercator grid ticks,
zone 19, shown in blue
Red tint indicates areas in which only
landmark buildings are shown
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
ROAD CLASSIFICATION
Heavy-duty
Light-duty
Medium-duty
Unimproved dirt
State Route
QUADRANGLE LOCATION
NEWPORT, R. I.
N4122.5—W7115/7.5
1957
AMS 6768 IV NE-SERIES V818

Block Island Quadrangle

a Straight line extensions of the outsides of each of the two jetties at the breachway entrance to Great Salt Pond.

b A straight line starting from the point of land on the northeast side of the Great Salt Pond breachway and running generally southeasterly to Harris (Breezy) Point.

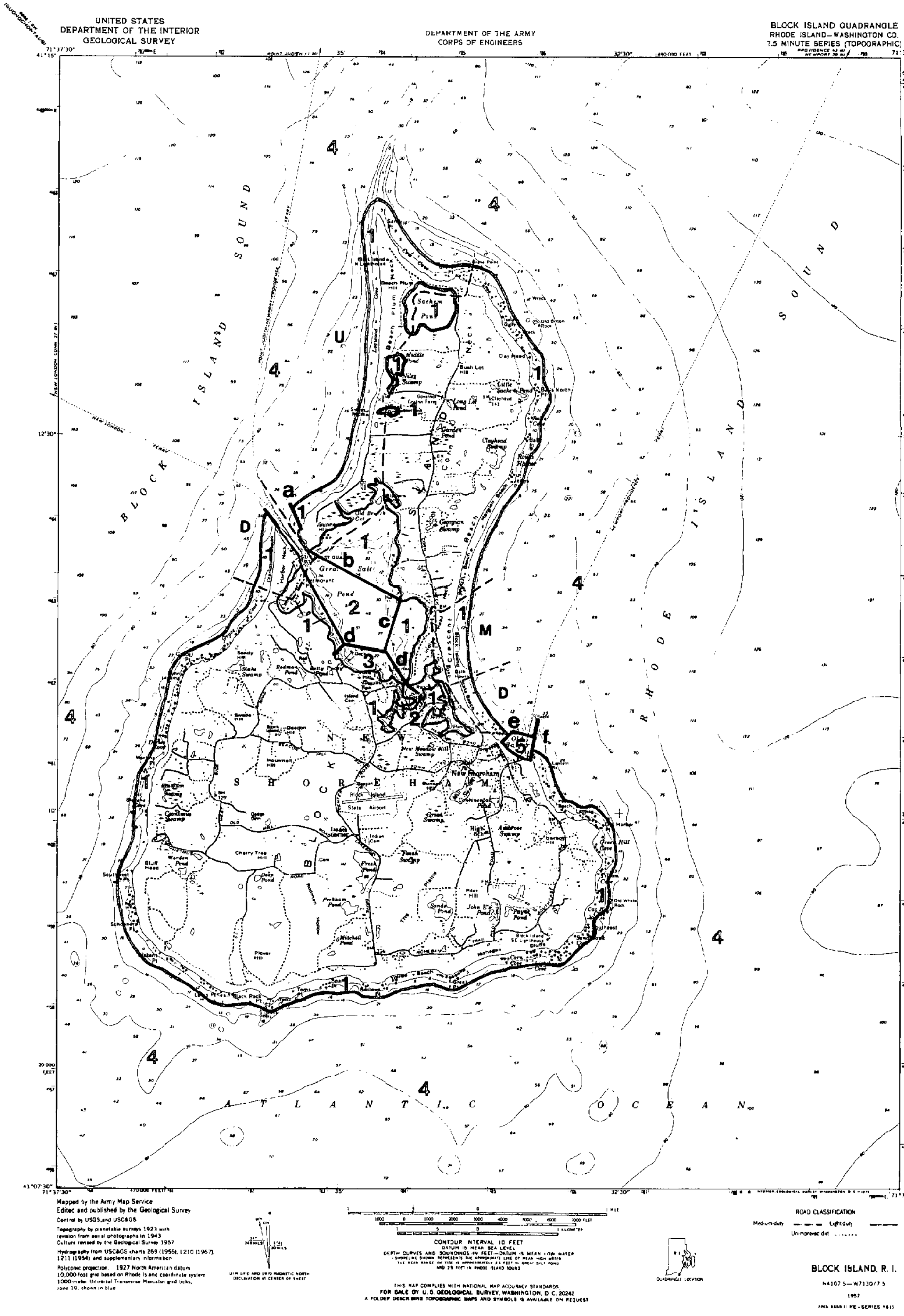
c A straight line starting at Harris (Breezy) Point and running generally southwesterly to Can Buoy #5.

d A straight line southwesterly extension of the west jetty at the breachway entrance to Great Salt Pond which joins with the seaward limit of a straight line (500 feet) extension of the boundary between the commercial/low residential zone area west of Champlin's Dock, thence turning generally easterly and running to Can Buoy #5, then turning generally south-southeasterly and running to the point of land on the eastern shore of the channel to Trim's Pond, thence turning 90 degrees and running west to land on the western side of the Trim's Pond Channel.

e A line along the outside of the west breakwater.

f A line along the outside of the east breakwater.

g A straight line starting at the boundary of lots 64-1 and 65 and running generally southeasterly to terminate at the northern boundary of lots 103 and 104. Revise Water Type designation west of Line G to Type 3.

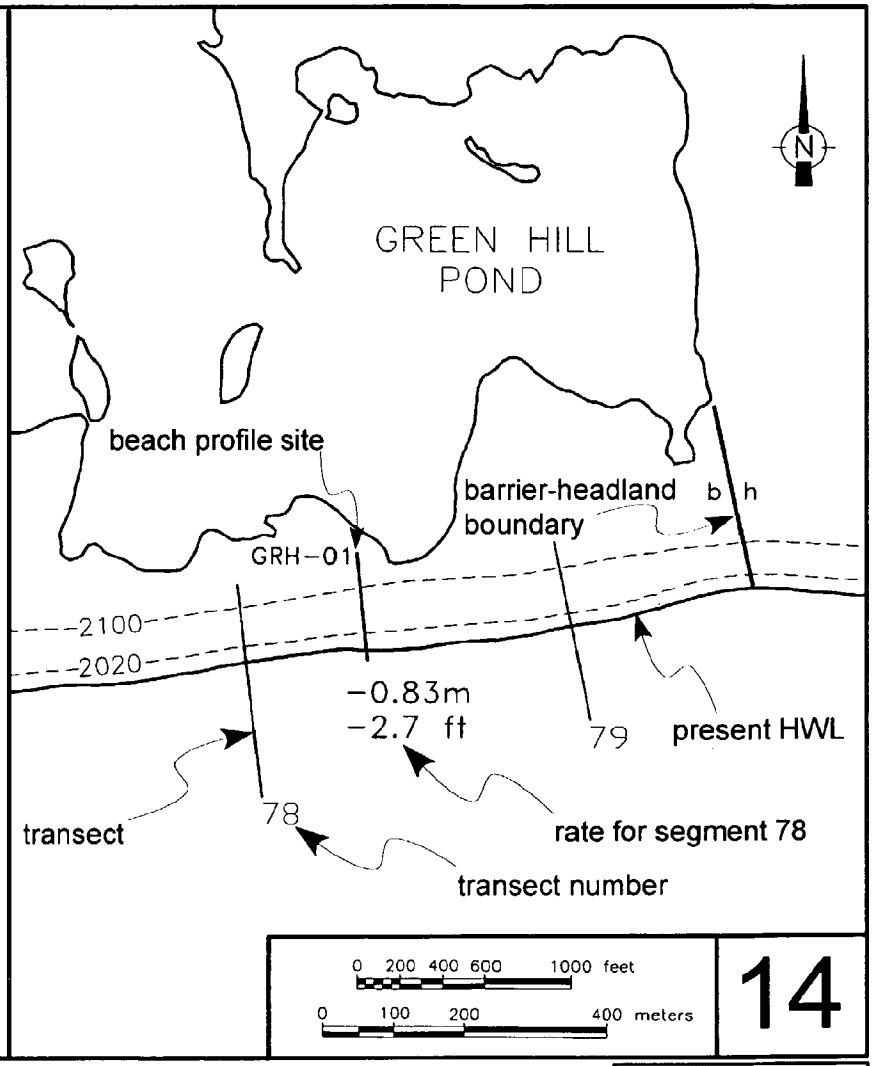

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
BLOCK ISLAND QUADRANGLE
RHODE ISLAND—WASHINGTON CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
BLOCK ISLAND SOUND
RHODE ISLAND SOUND
ATLANTIC OCEAN
NEW SHOREHAM
BLOCK ISLAND
Sachem Pond
Great Salt Pond
New Harbor
Old Harbor
State Airport
a
b
c
d
e
f
U
M
D
1
2
3
4
5
Mapped by the Army Map Service
Edited and published by the Geological Survey
Control by USGS and USC&GS
Topography by planetable surveys 1923 with revision from aerial photographs in 1943
Culture revised by the Geological Survey 1957
Hydrography from USC&GS charts 269 (1956), 1210 (1967), 1211 (1954) and supplementary information
Polyconic projection. 1927 North American datum
10,000-foot grid based on Rhode Island coordinate system
1000-meter Universal Transverse Mercator grid ticks, zone 19, shown in blue
UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
QUADRANGLE LOCATION
ROAD CLASSIFICATION
Medium-duty
Light-duty
Unimproved dirt
BLOCK ISLAND, R. I.
N4107.5—W7130/7.5
1957
AMS 6566 II NE—SERIES V815

Shoreline Change Maps

Watch Hill to Pt. Judith

SHORELINE CHANGE MAPS

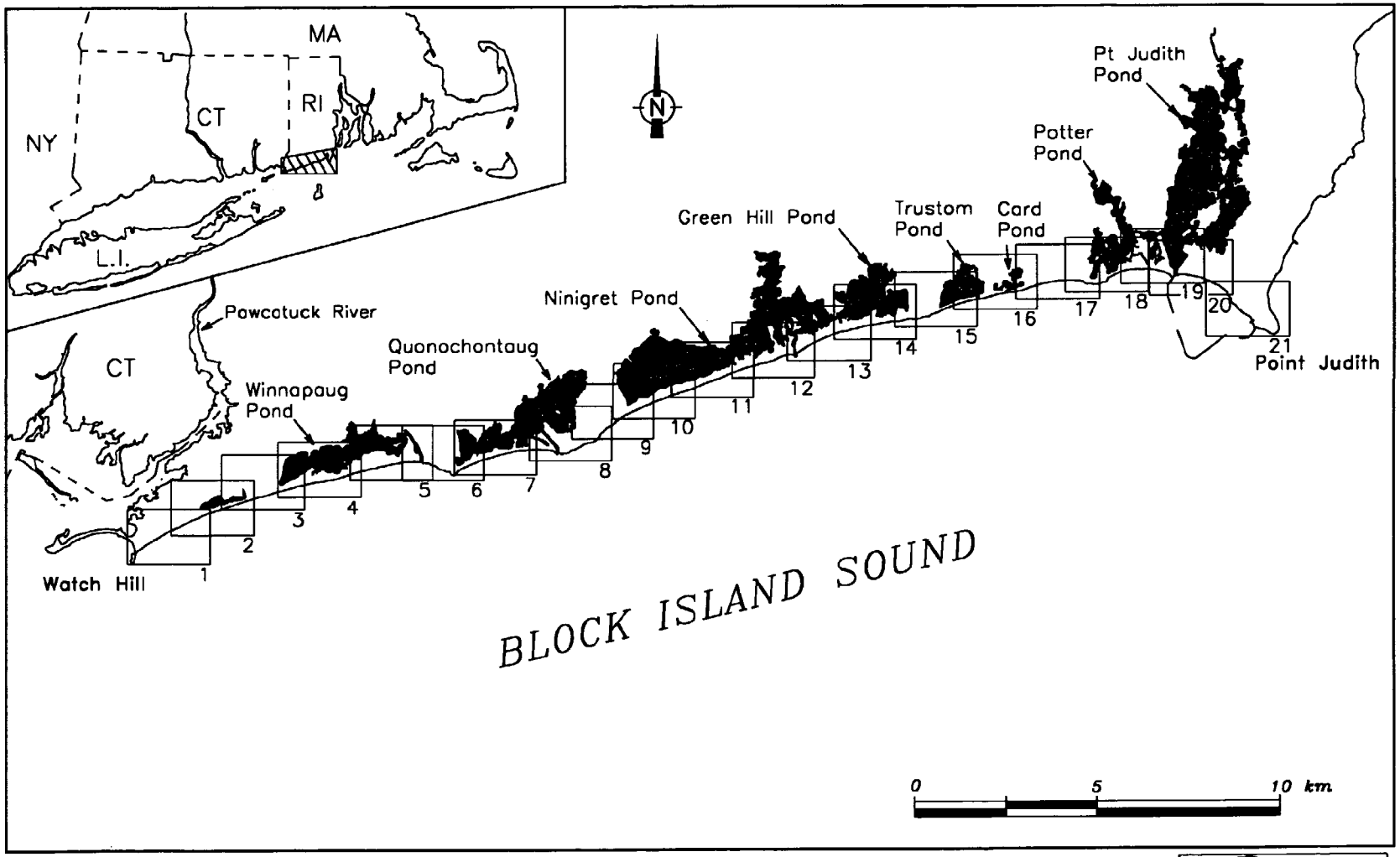
The following 27 maps show the annual rate of change in the position of the high water line (HWL) as measured from vertical aerial photographs dating back to 1939. Negative values indicate landward movement of the HWL, and positive values denote seaward displacement. Also shown are the transect lines defining the shoreline segments for which measurements were made, the locations of the long-term beach profiles, the projected HWL positions for the years 2020 and 2100, and the boundaries between barriers and headlands. Shoreline change rates for segments 15-104 are from Boothroyd and others (1988), rates for segments 105-113 are from Regan (1976), and rates for segments 1B-41B are from Harwood (1993). The maps are plotted at a scale of 1:10,000 (1cm = 100m).



14

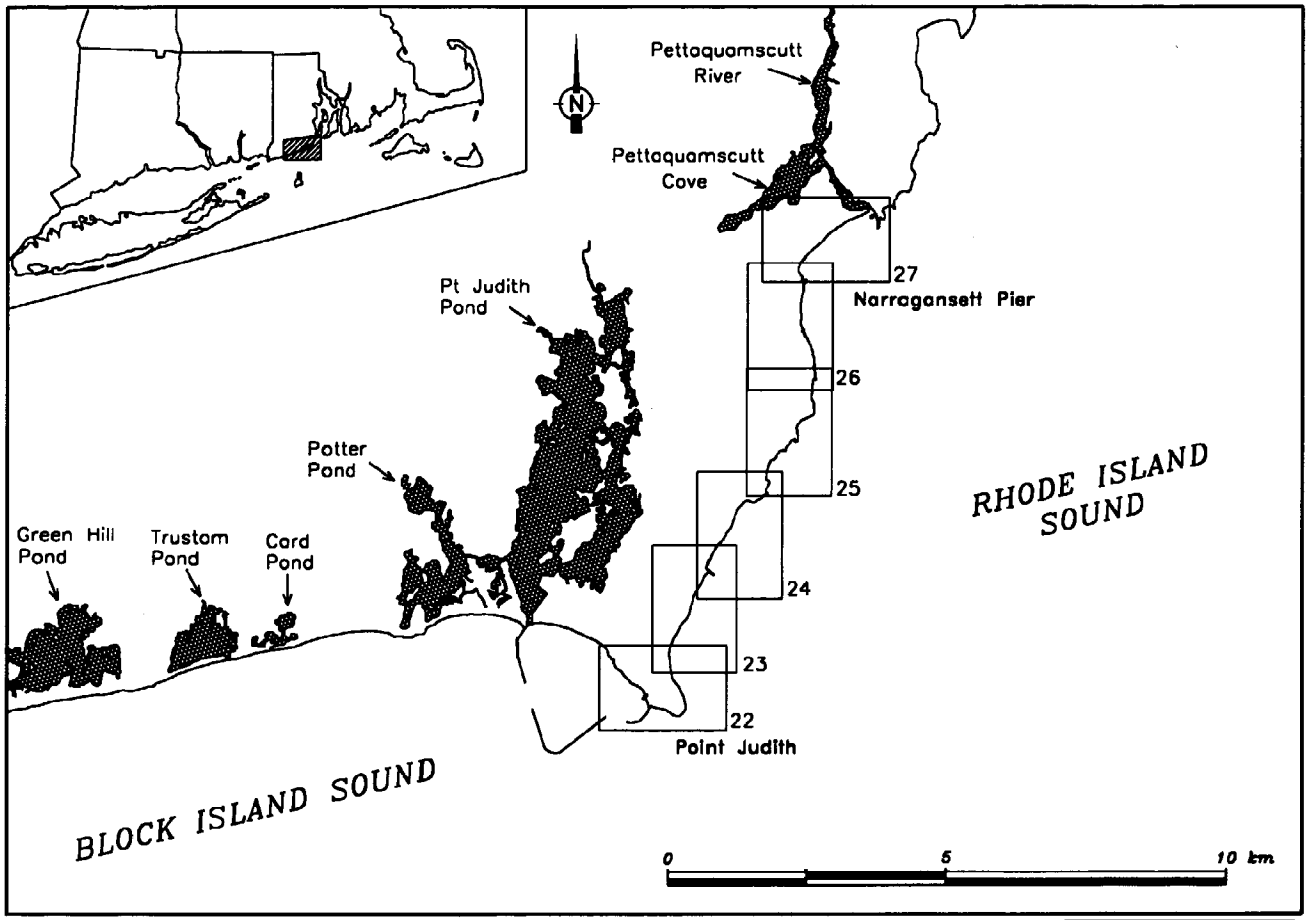
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

Boothroyd & Galagan, 1995



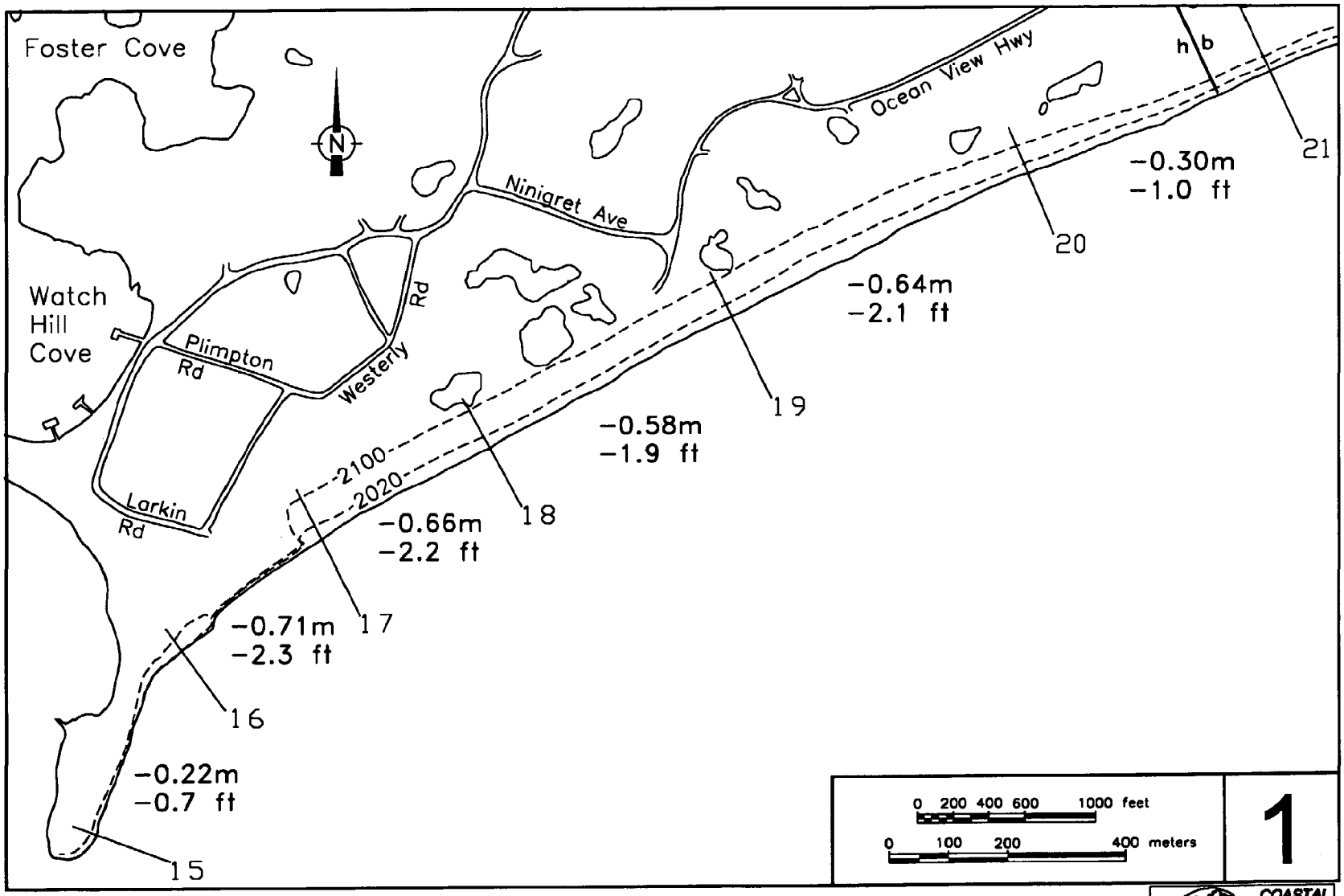
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

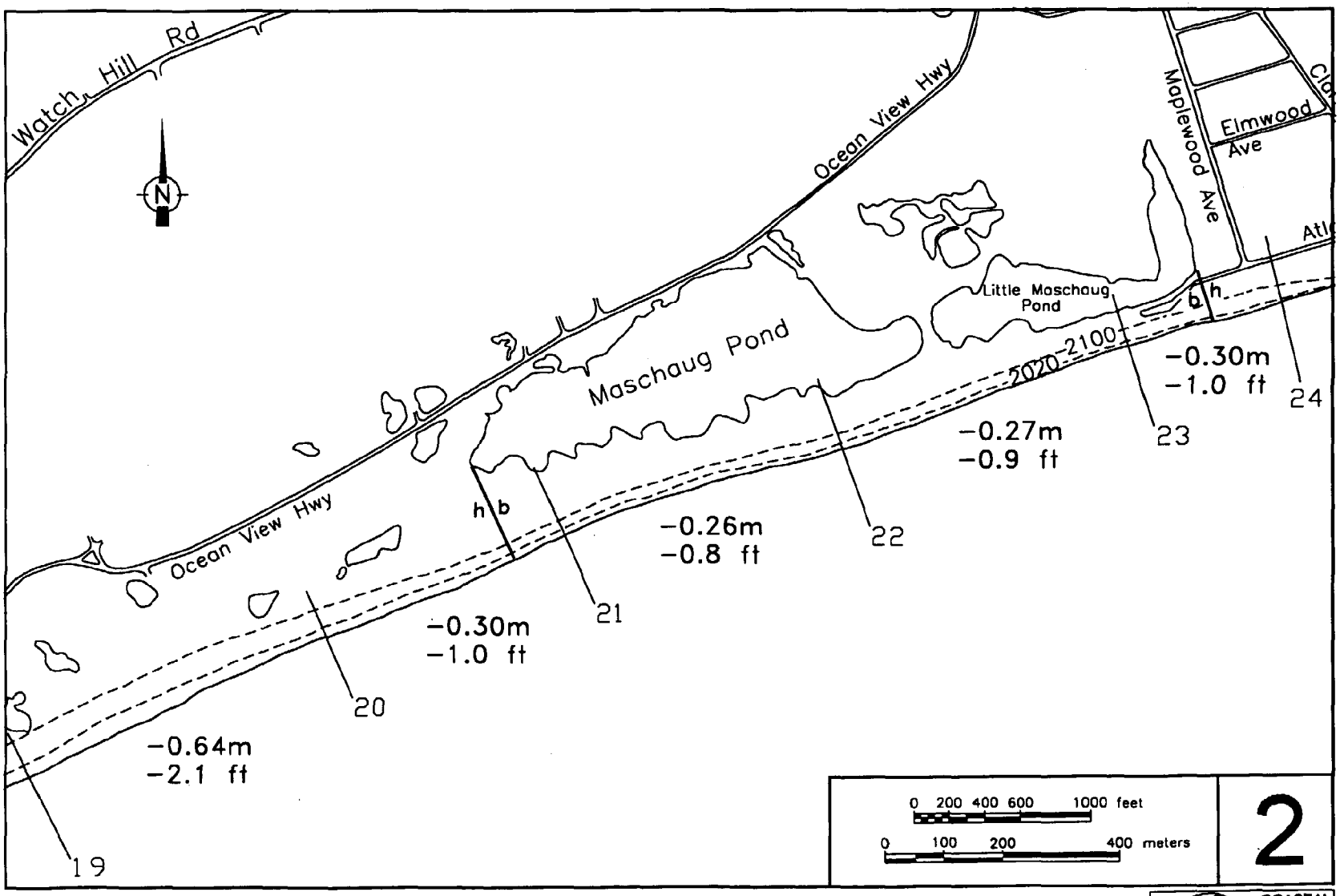
Boothroyd & Galagan, 1995



COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

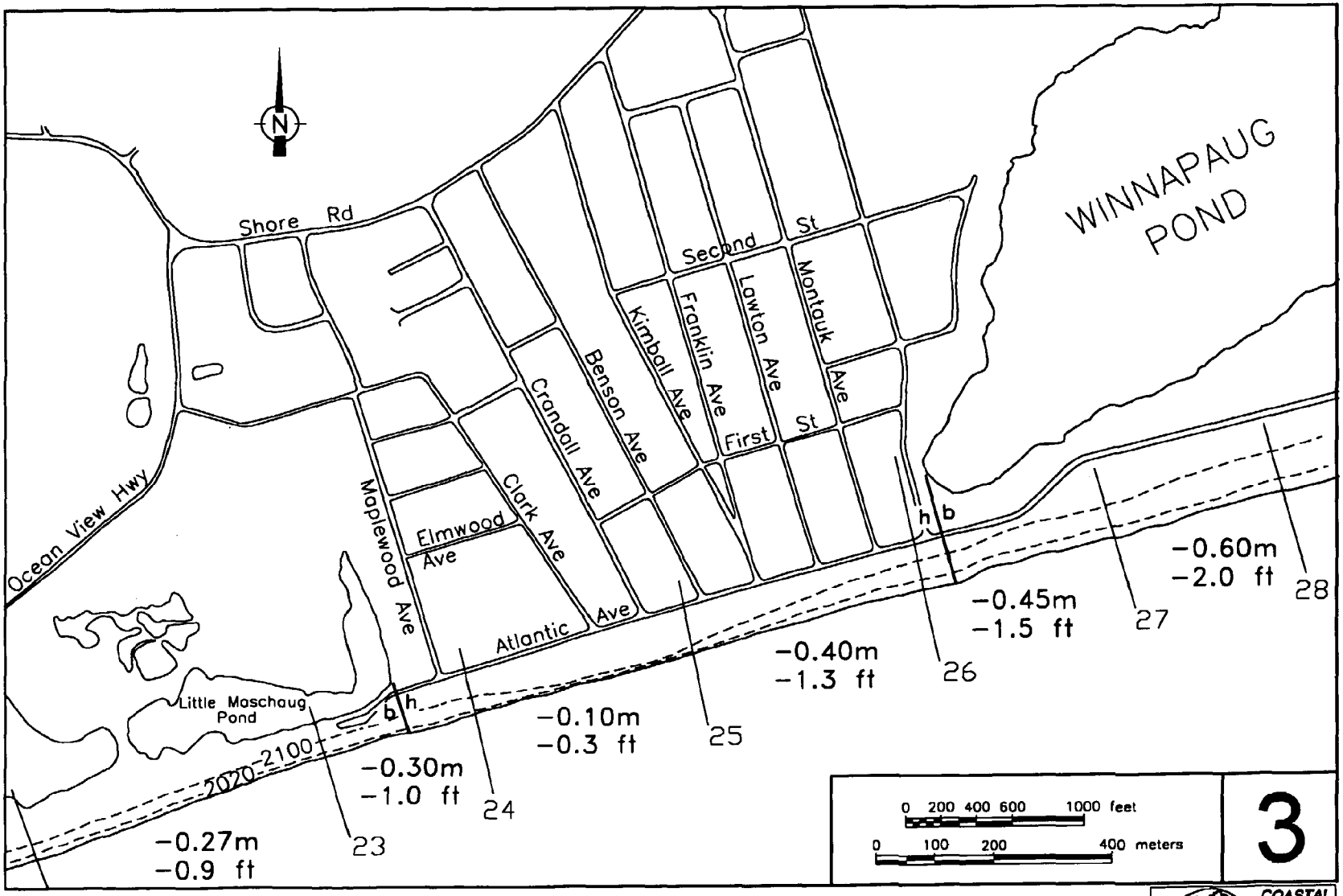
Boothroyd & Harwood, 1995

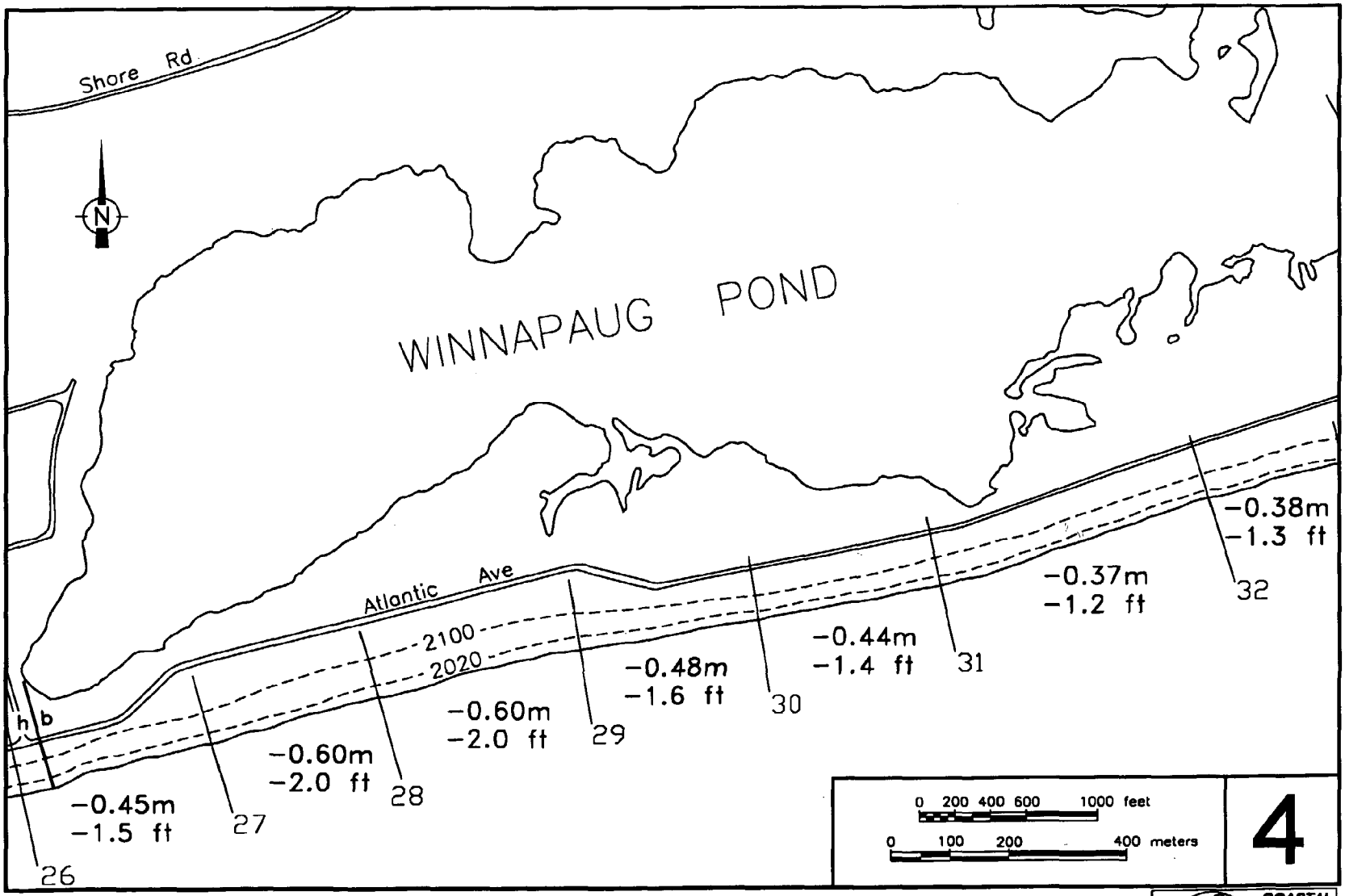

Foster Cove
N
Ninigret Ave
Ocean View Hwy
h
b
21
20
19
18
17
16
15
Watch Hill Cove
Plimpton Rd
Westerly Rd
Larkin Rd
2100
2020
-0.30m
-1.0 ft
-0.64m
-2.1 ft
-0.58m
-1.9 ft
-0.66m
-2.2 ft
-0.71m
-2.3 ft
-0.22m
-0.7 ft
0 200 400 600 1000 feet
0 100 200 400 meters
1
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995



COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

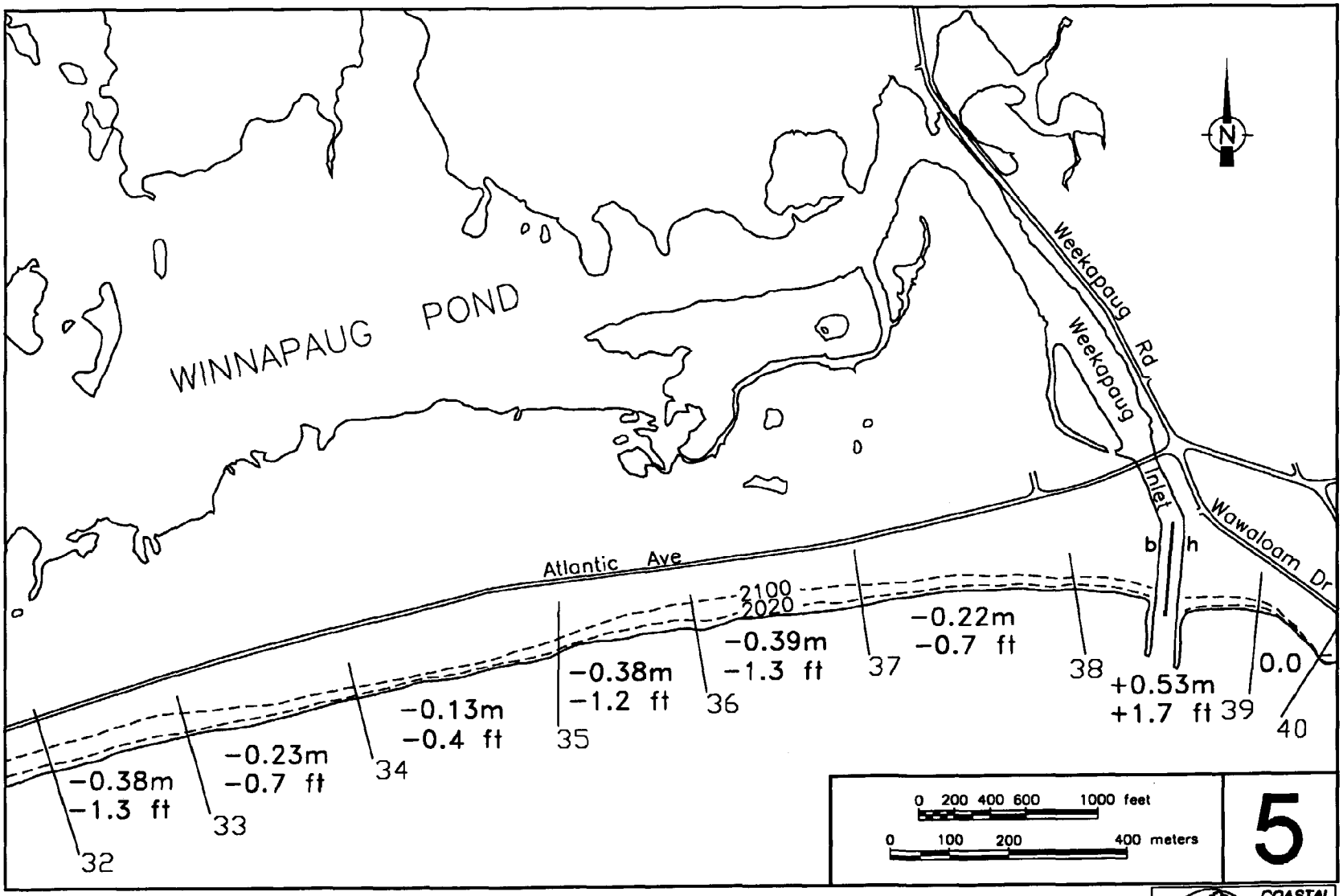
Boothroyd & Galagan, 1995


N
Shore Rd
WINNAPAUG POND
Second St
First St
Montauk Ave
Lawton Ave
Franklin Ave
Kimball Ave
Benson Ave
Crandall Ave
Clark Ave
Maplewood Ave
Elmwood Ave
Atlantic Ave
Ocean View Hwy
Little Maschaug Pond
7020-2100
h
b
-0.27m
-0.9 ft
23
-0.30m
-1.0 ft
24
-0.10m
-0.3 ft
25
-0.40m
-1.3 ft
26
-0.45m
-1.5 ft
27
-0.60m
-2.0 ft
28
0 200 400 600 1000 feet
0 100 200 400 meters
3
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995



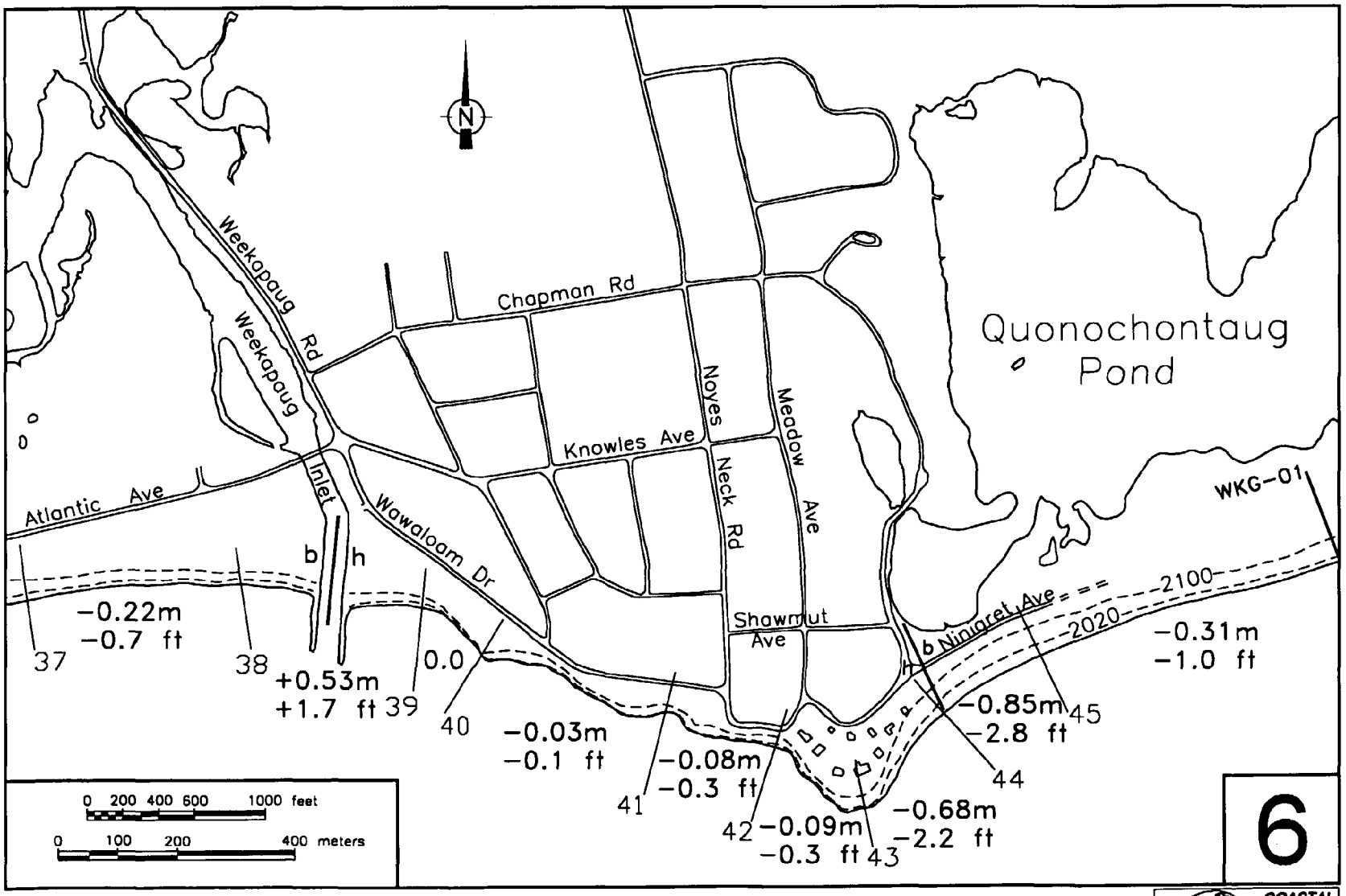
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

Boothroyd & Galagan, 1995

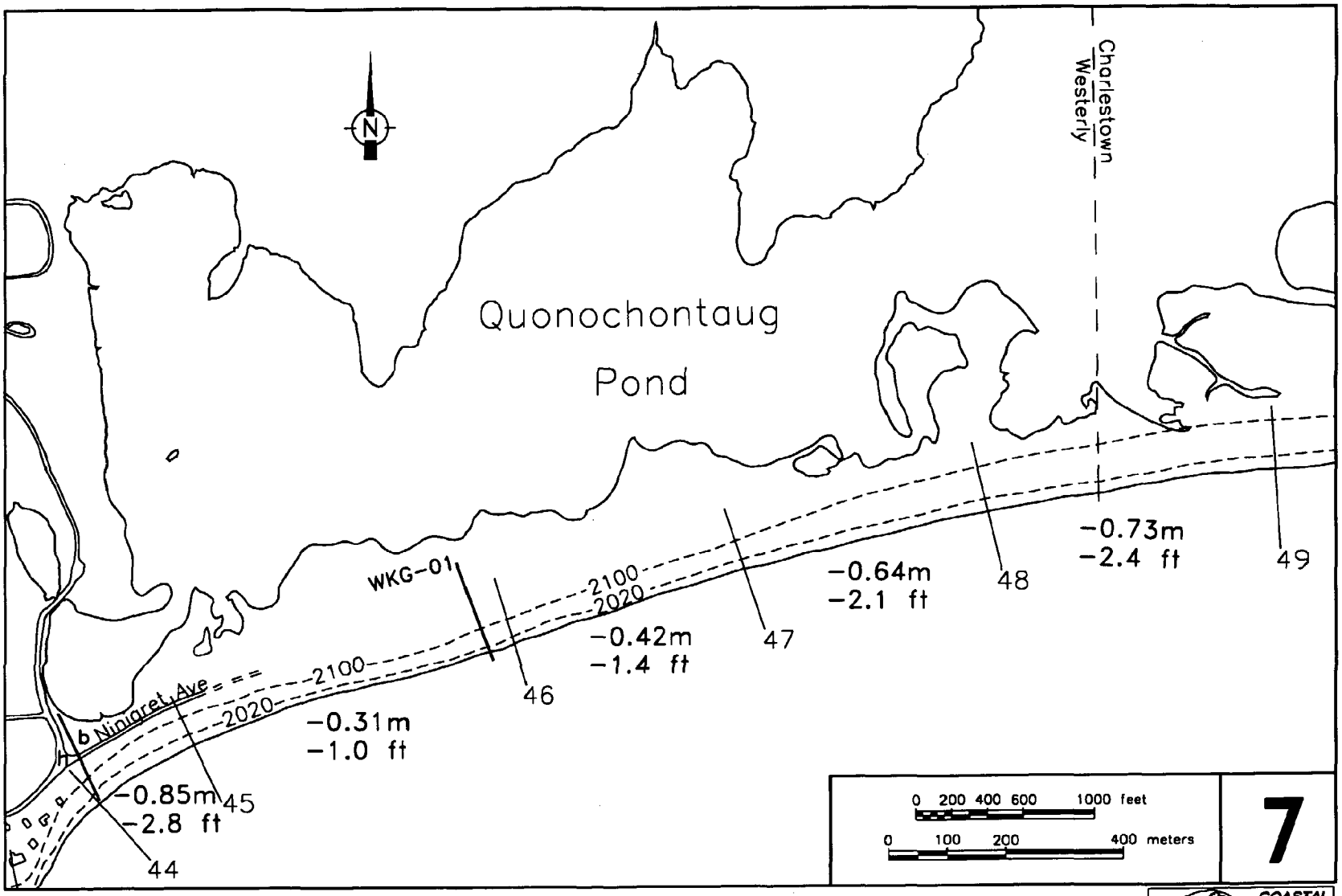


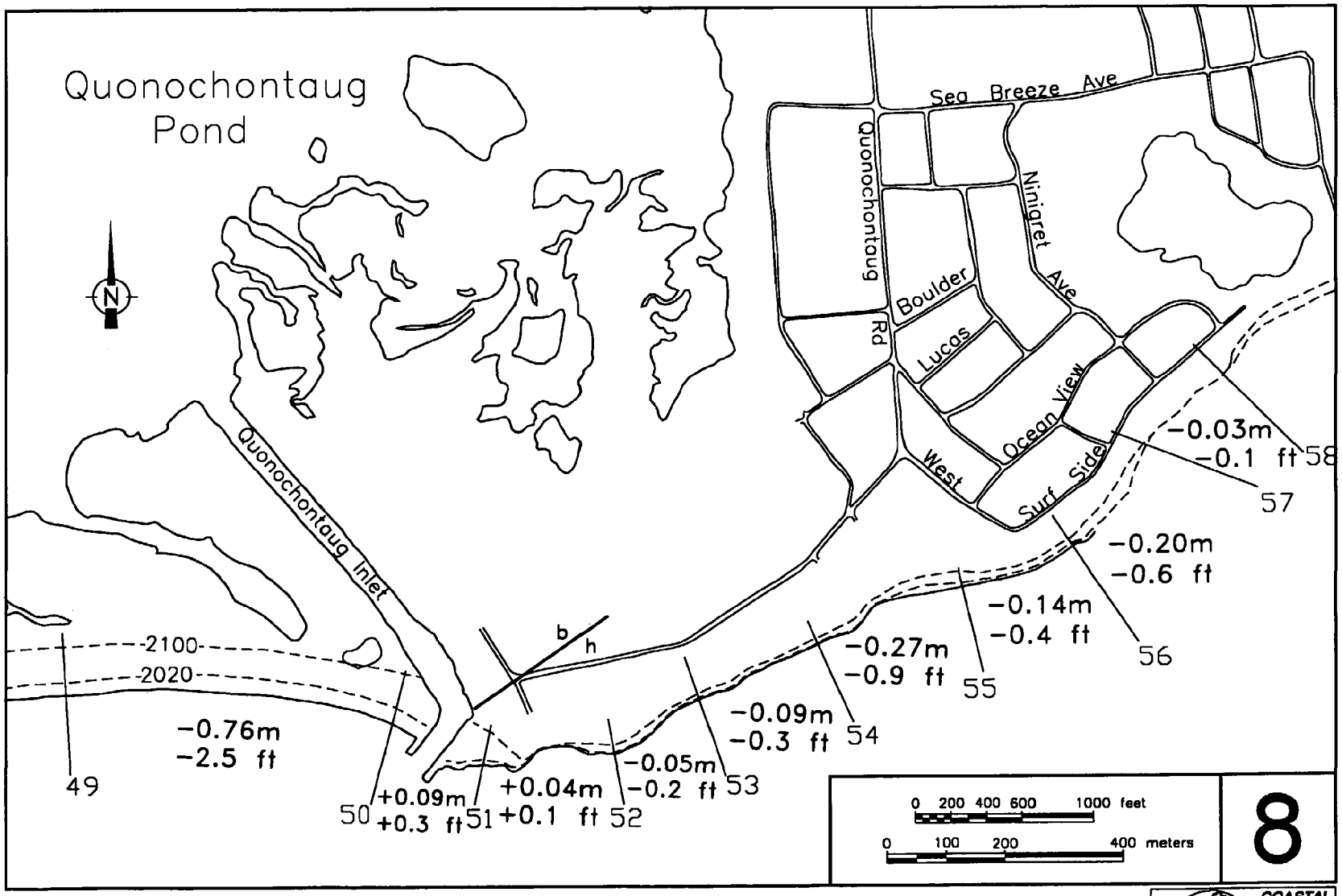
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

Boothroyd & Galagan, 1995



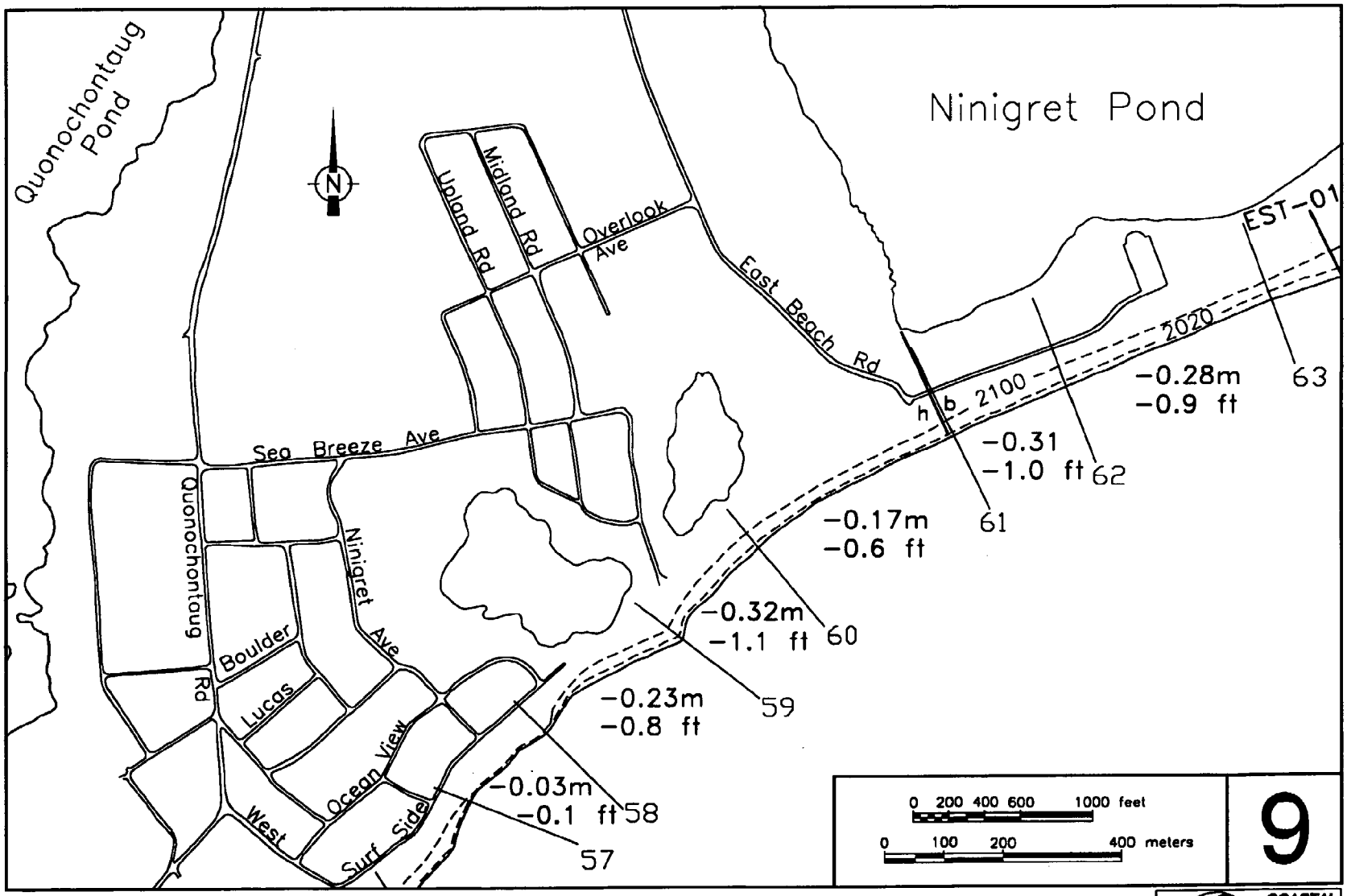
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995

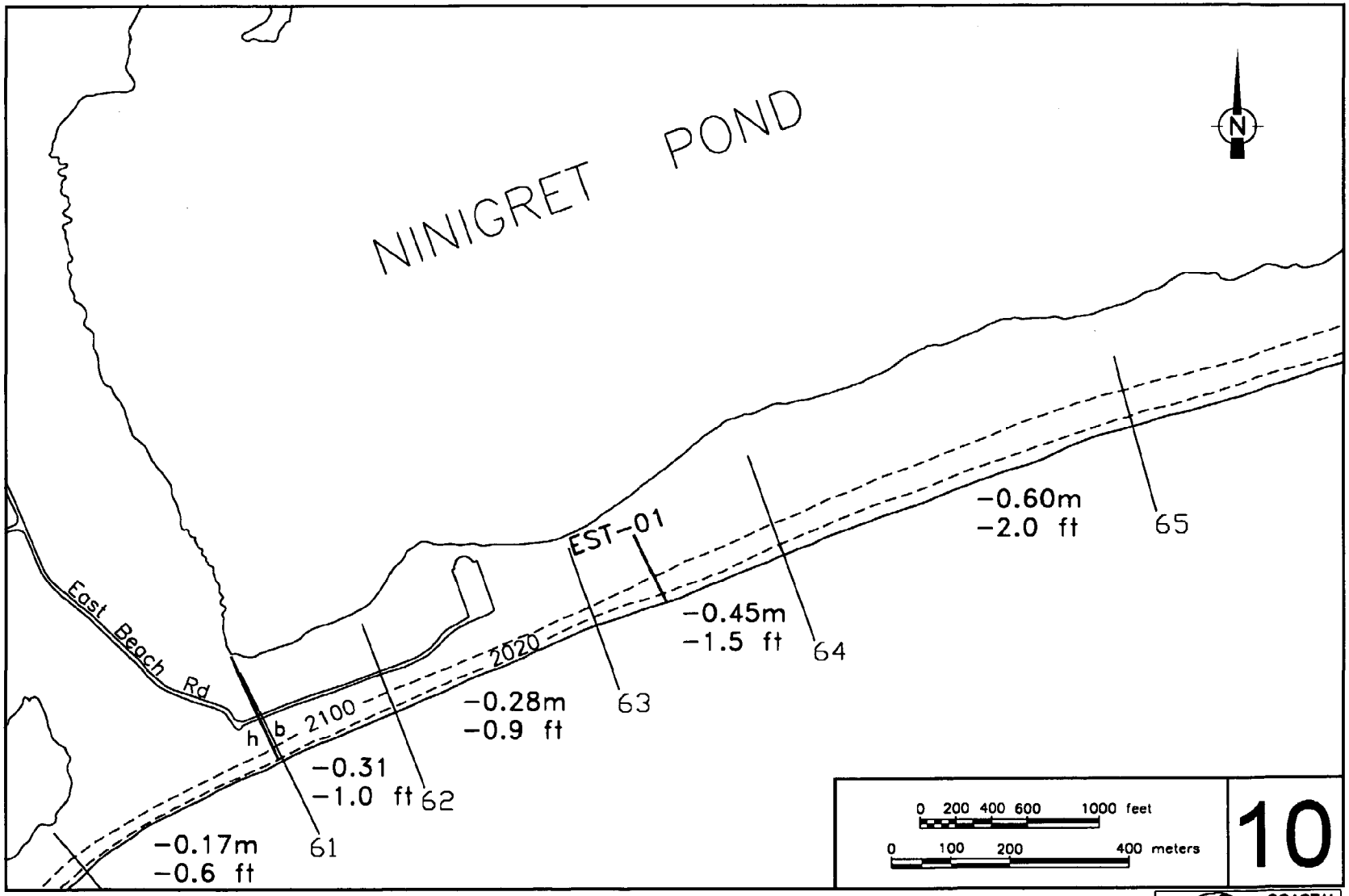

N
Quonochontaug
Pond
Charlestown
Westerly
WKG-01
2100
2020
2100
2020
Ninigret Ave
-0.85m
-2.8 ft
-0.31m
-1.0 ft
-0.42m
-1.4 ft
-0.64m
-2.1 ft
-0.73m
-2.4 ft
44
45
46
47
48
49
0 200 400 600 1000 feet
0 100 200 400 meters
7
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995



COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

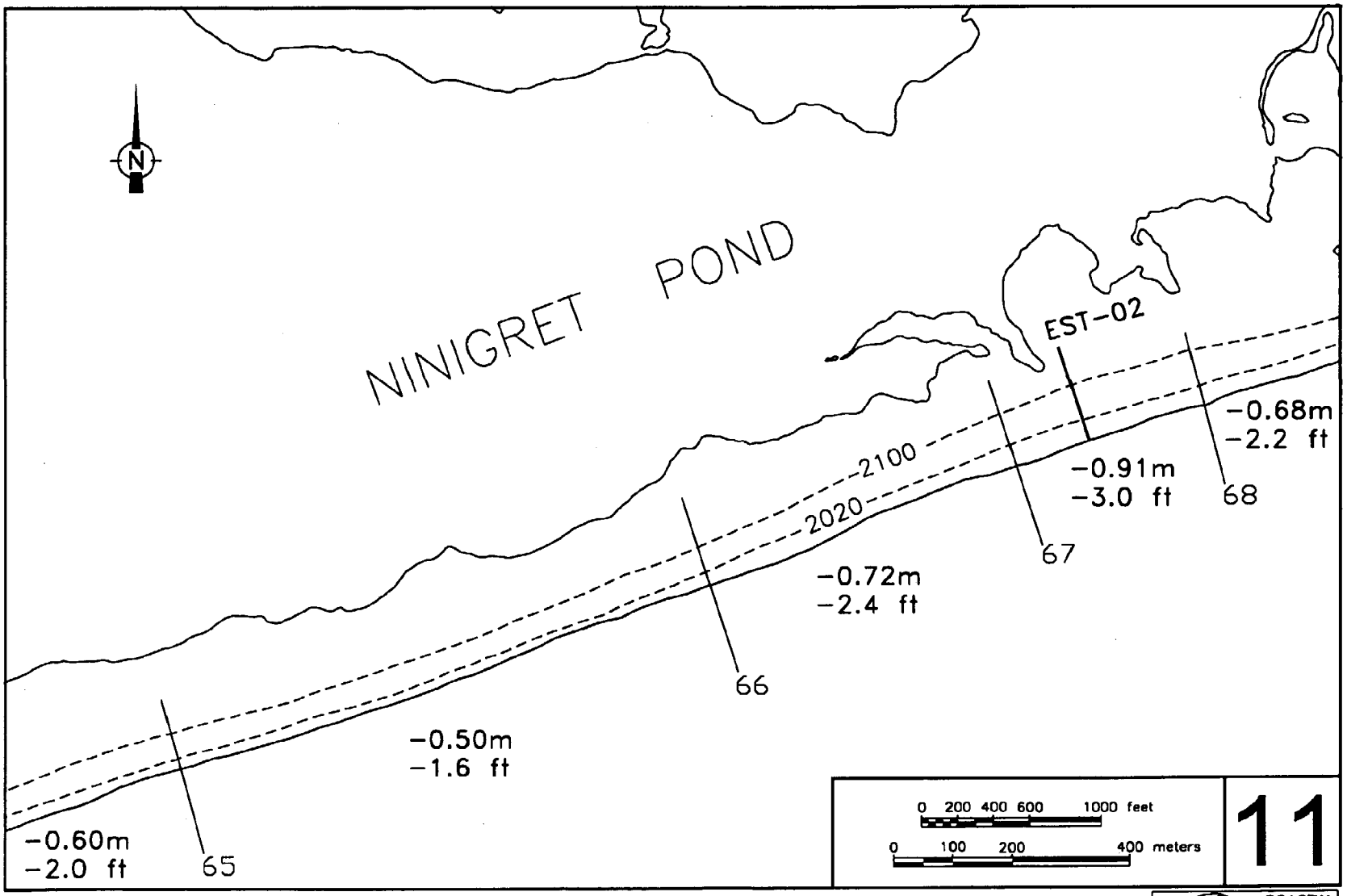
Boothroyd & Galagan, 1995


Quonochontaug Pond
Ninigret Pond
N
Midland Rd
Upland Rd
Overlook Ave
East Beach Rd
EST-01
2020
2100
h
b
−0.28m
−0.9 ft
63
−0.31
−1.0 ft
62
−0.17m
−0.6 ft
61
−0.32m
−1.1 ft
60
−0.23m
−0.8 ft
59
−0.03m
−0.1 ft
58
57
Sea Breeze Ave
Quonochontaug Rd
Boulder
Lucas
Ninigret Ave
Ocean View
West
Surf Side
0 200 400 600 1000 feet
0 100 200 400 meters
9
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995



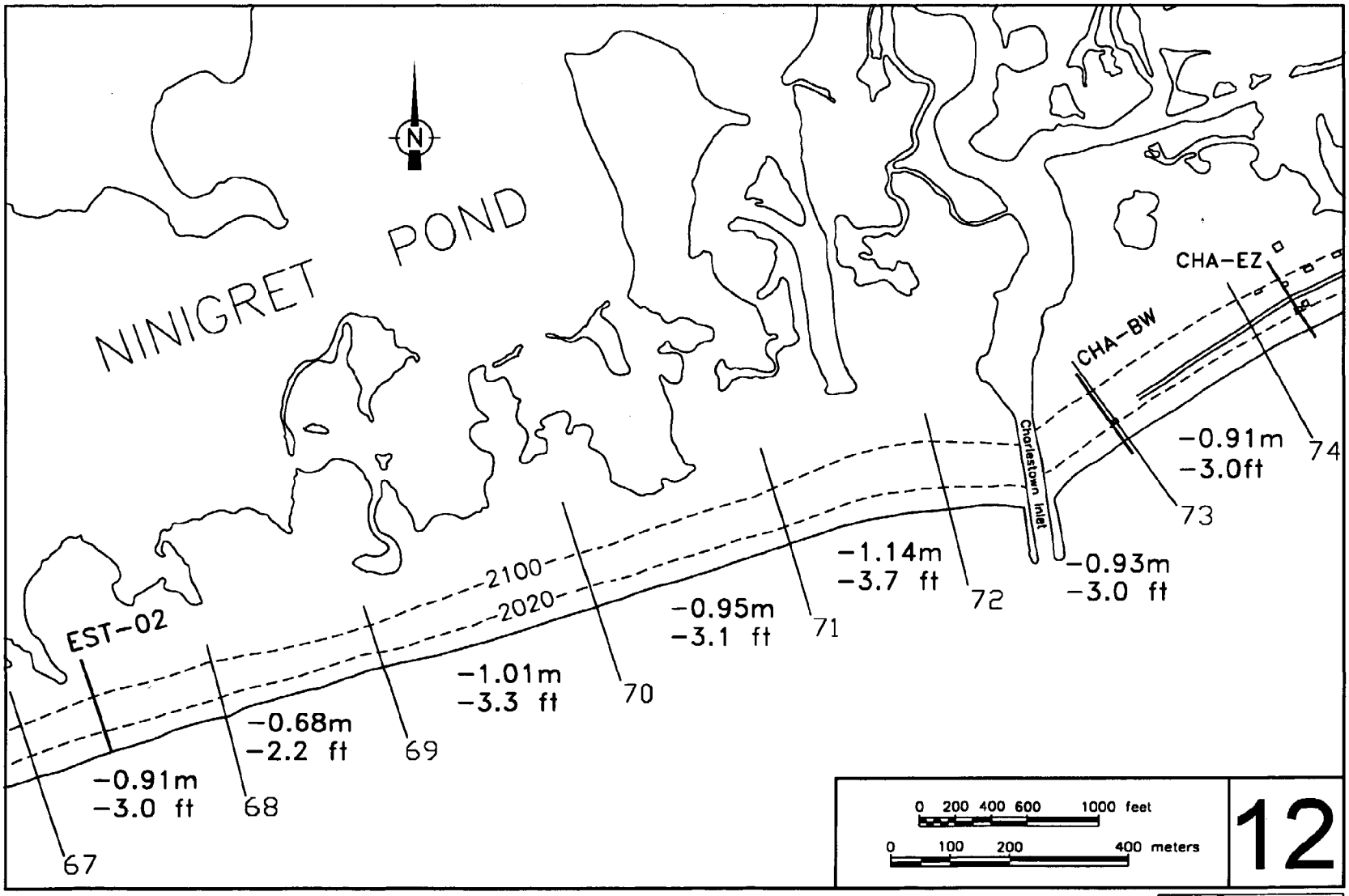
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

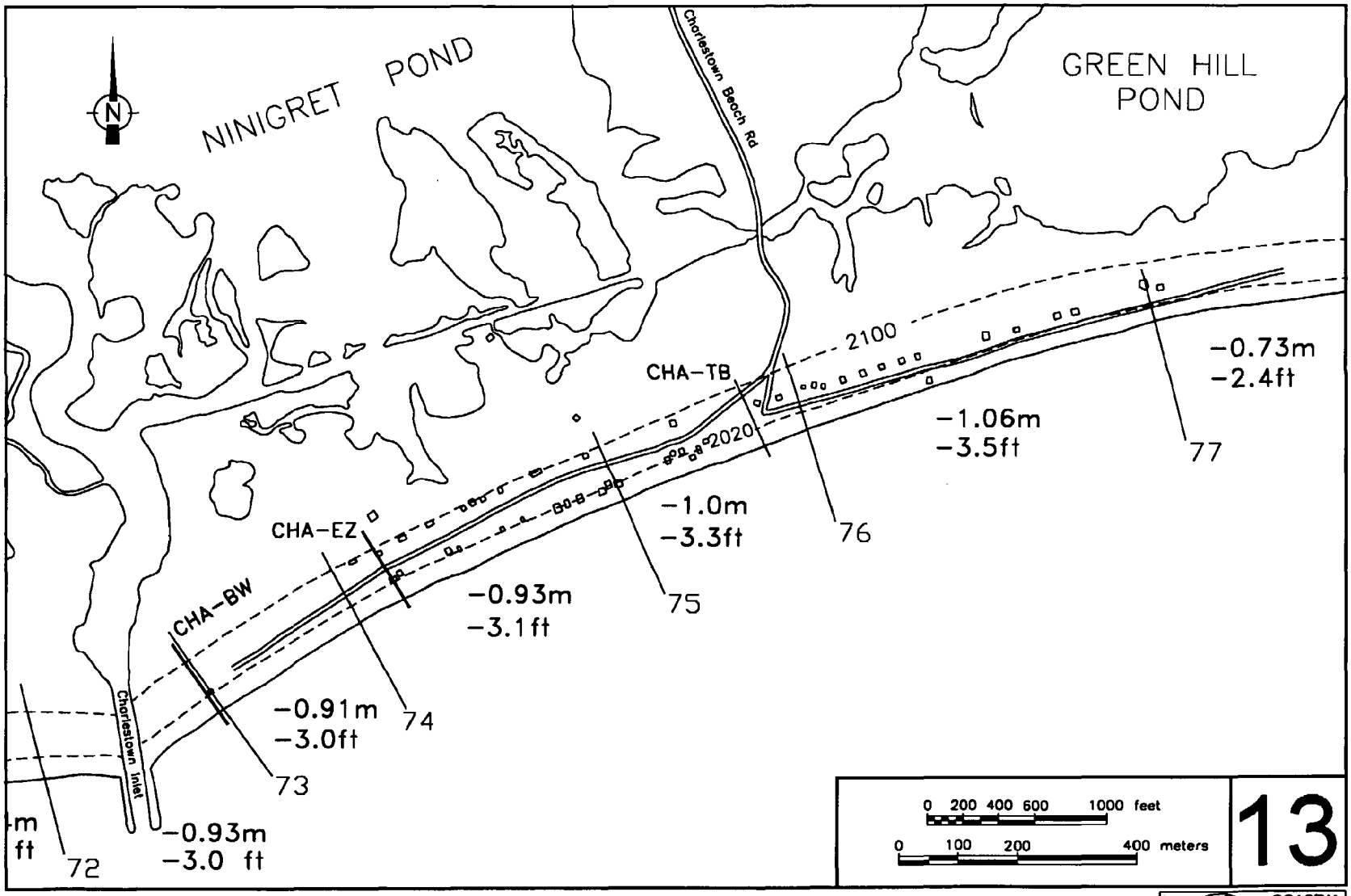
Boothroyd & Galagan, 1995

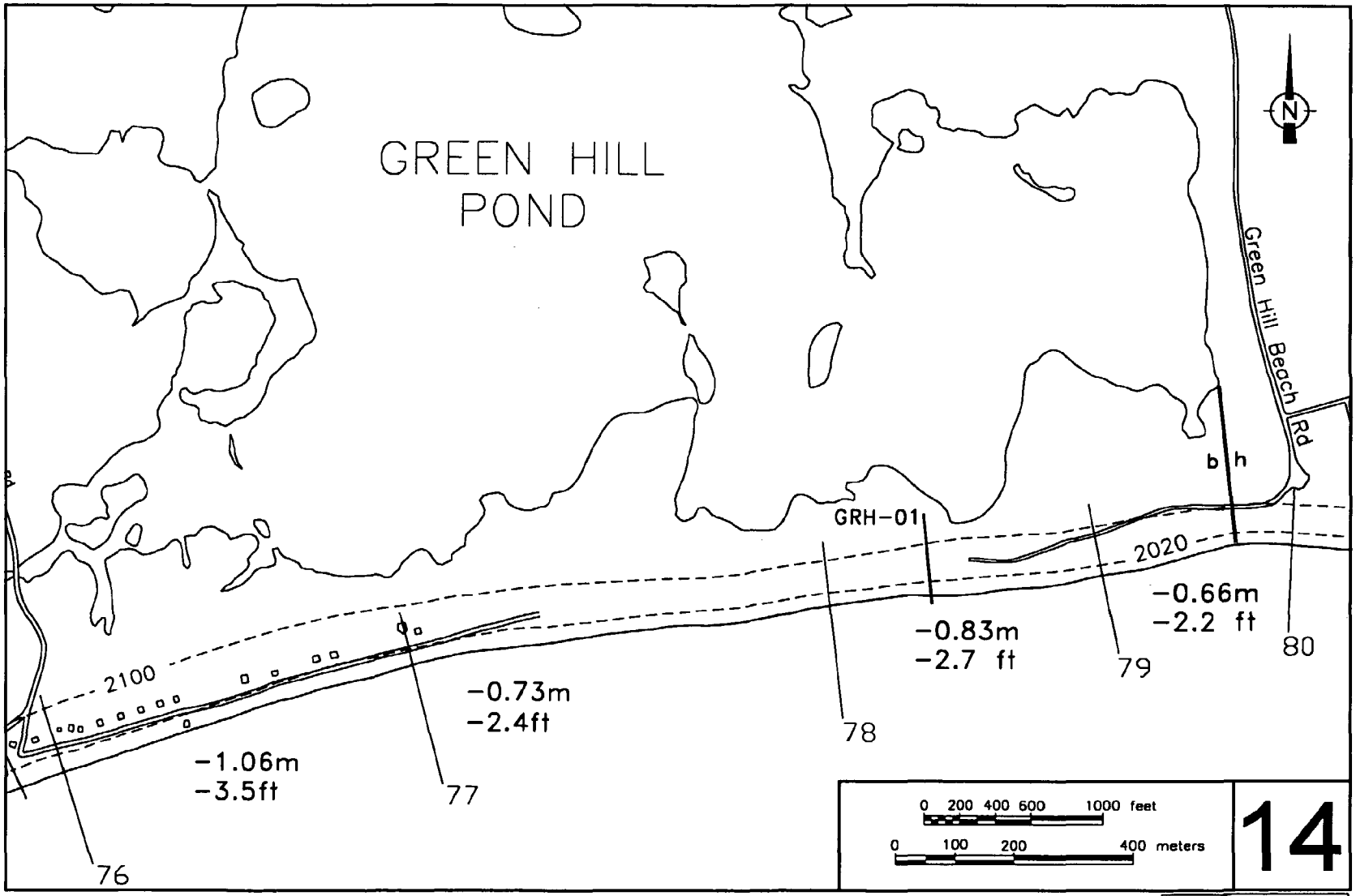


COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

Boothroyd & Galagan, 1995

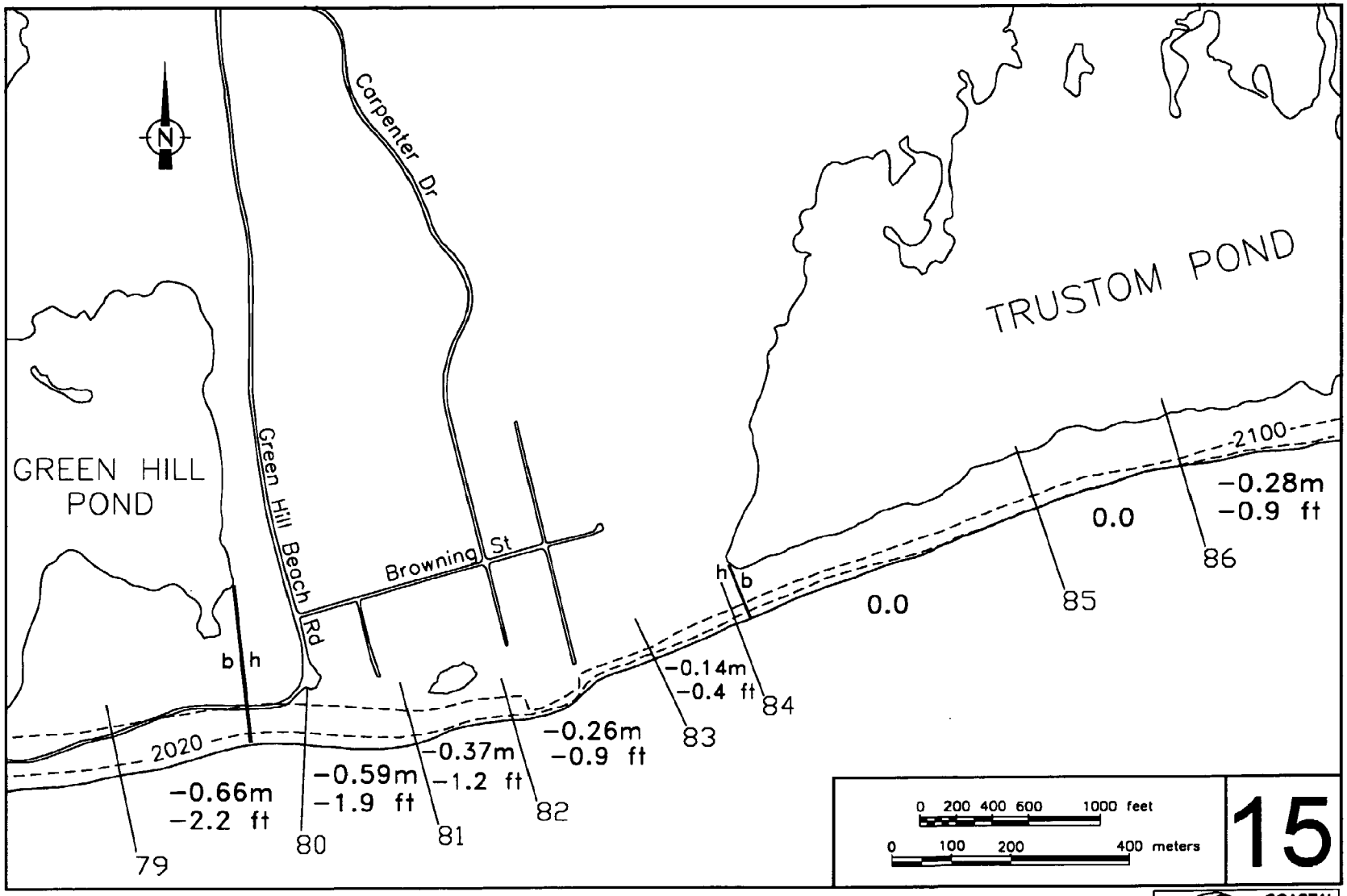

NINIGRET POND
N
CHA-EZ
CHA-BW
Charlestown Inlet
EST-02
2100
2020
-0.91m
-3.0ft
74
73
-0.93m
-3.0 ft
72
-1.14m
-3.7 ft
71
-0.95m
-3.1 ft
70
-1.01m
-3.3 ft
69
-0.68m
-2.2 ft
68
-0.91m
-3.0 ft
67
0 200 400 600 1000 feet
0 100 200 400 meters
12
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan. 1995


NINIGRET POND
GREEN HILL POND
Charlestown Beach Rd
N
2100
2020
CHA-TB
CHA-EZ
CHA-BW
Charlestown Inlet
72
73
74
75
76
77
-0.93m
-3.0 ft
-0.91m
-3.0ft
-0.93m
-3.1ft
-1.0m
-3.3ft
-1.06m
-3.5ft
-0.73m
-2.4ft
0 200 400 600 1000 feet
0 100 200 400 meters
13
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995



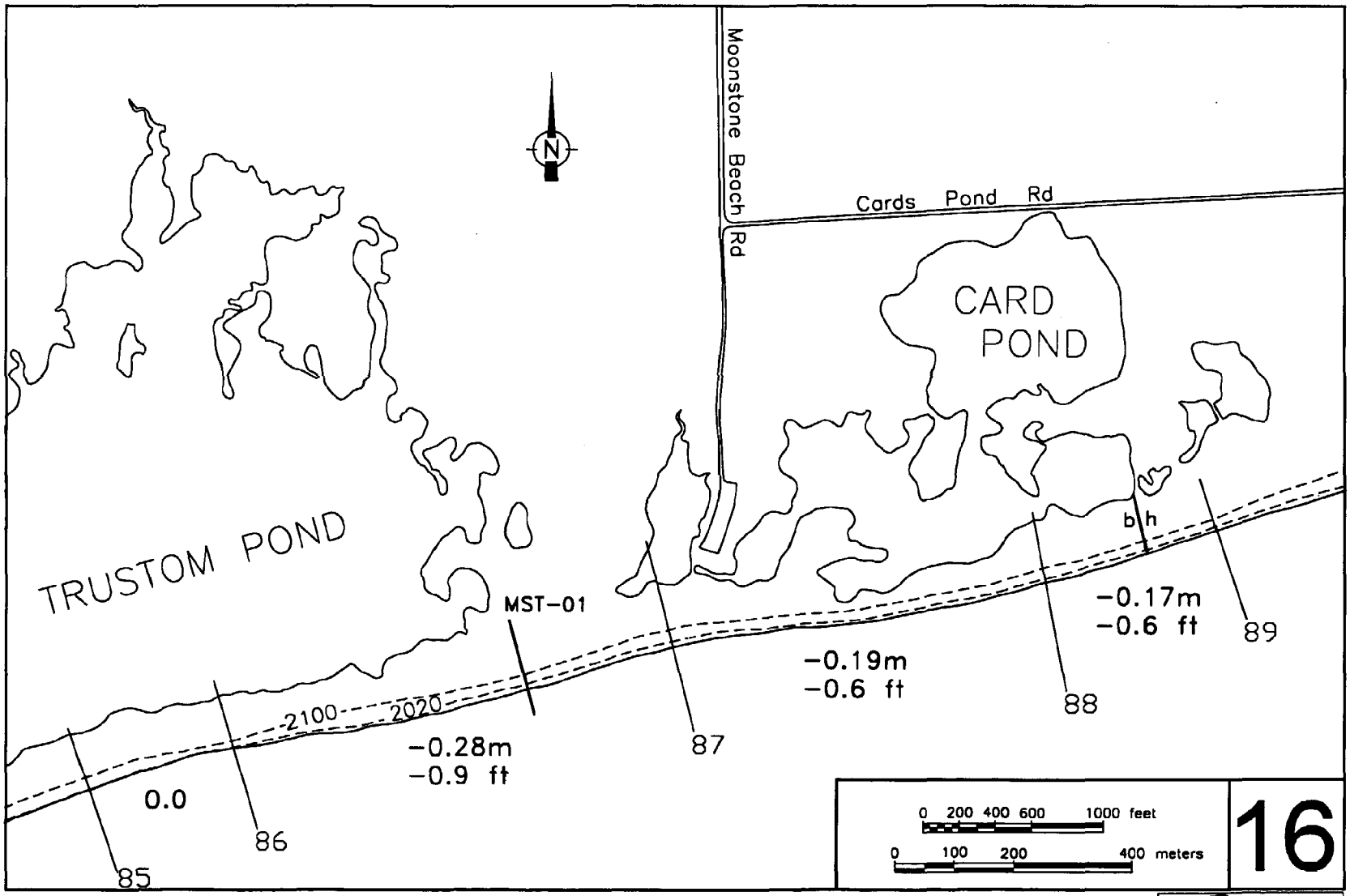
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

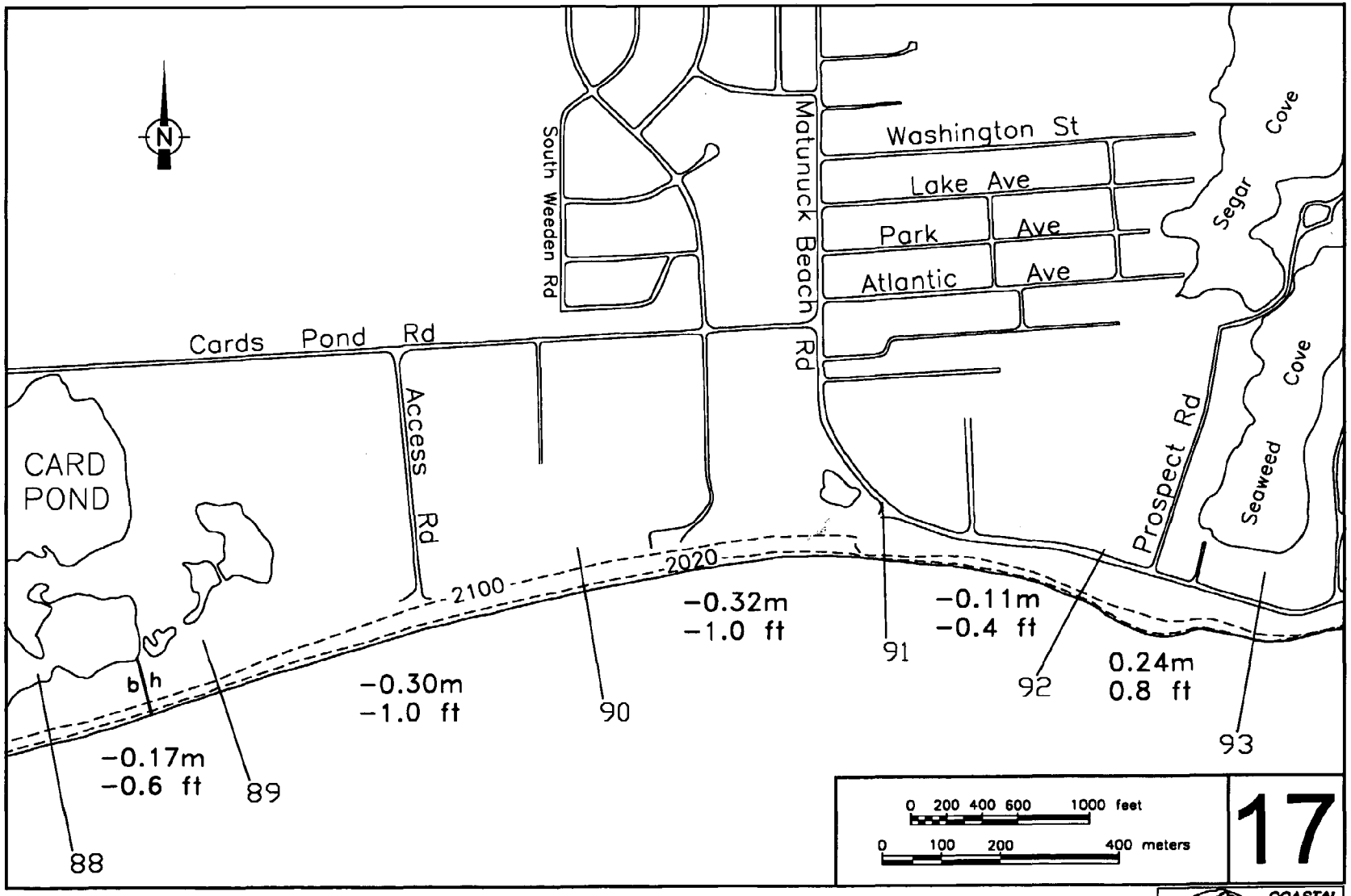
Boothroyd & Galagan, 1995

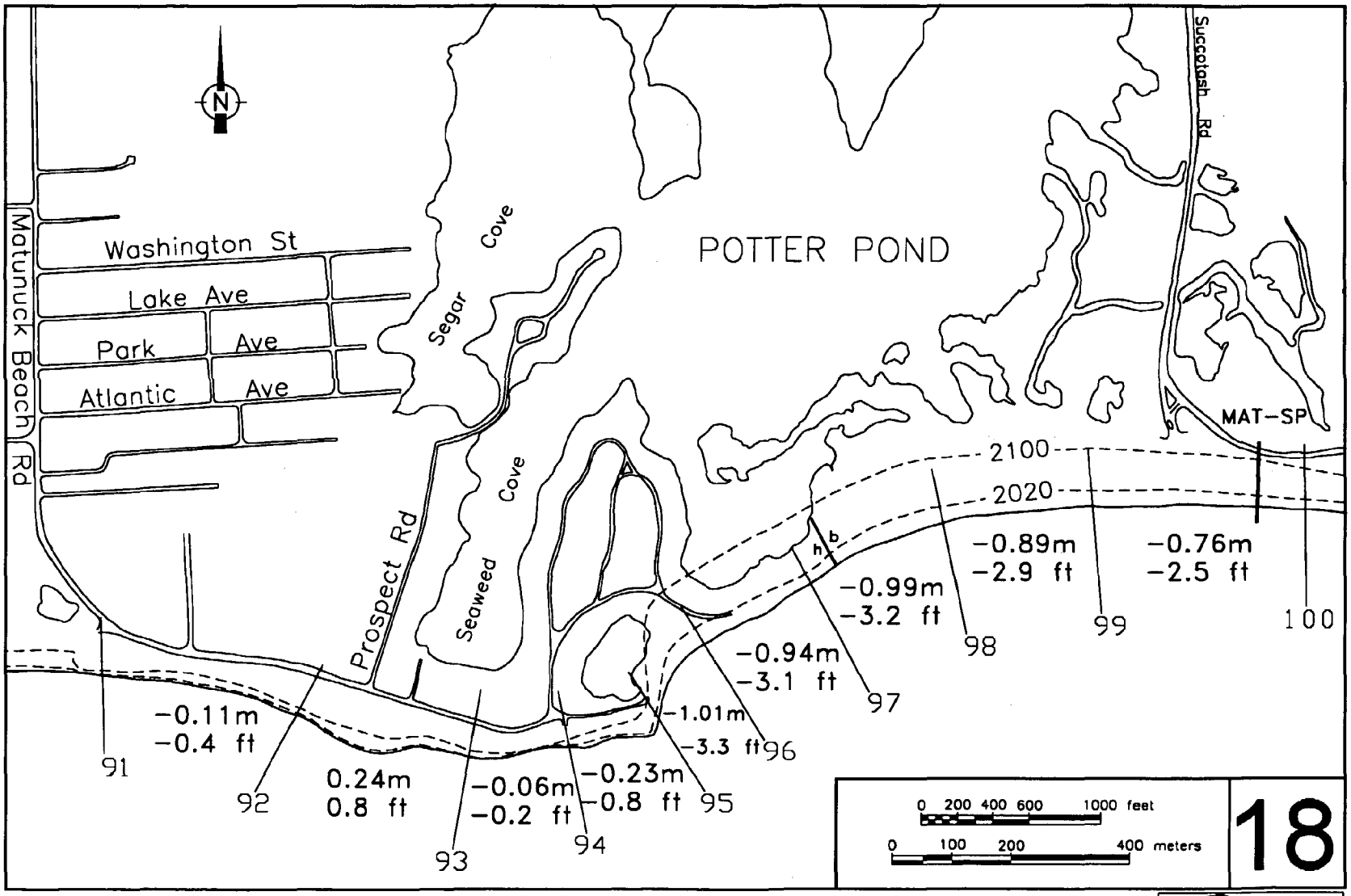


COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

Boothroyd & Galagan, 1995

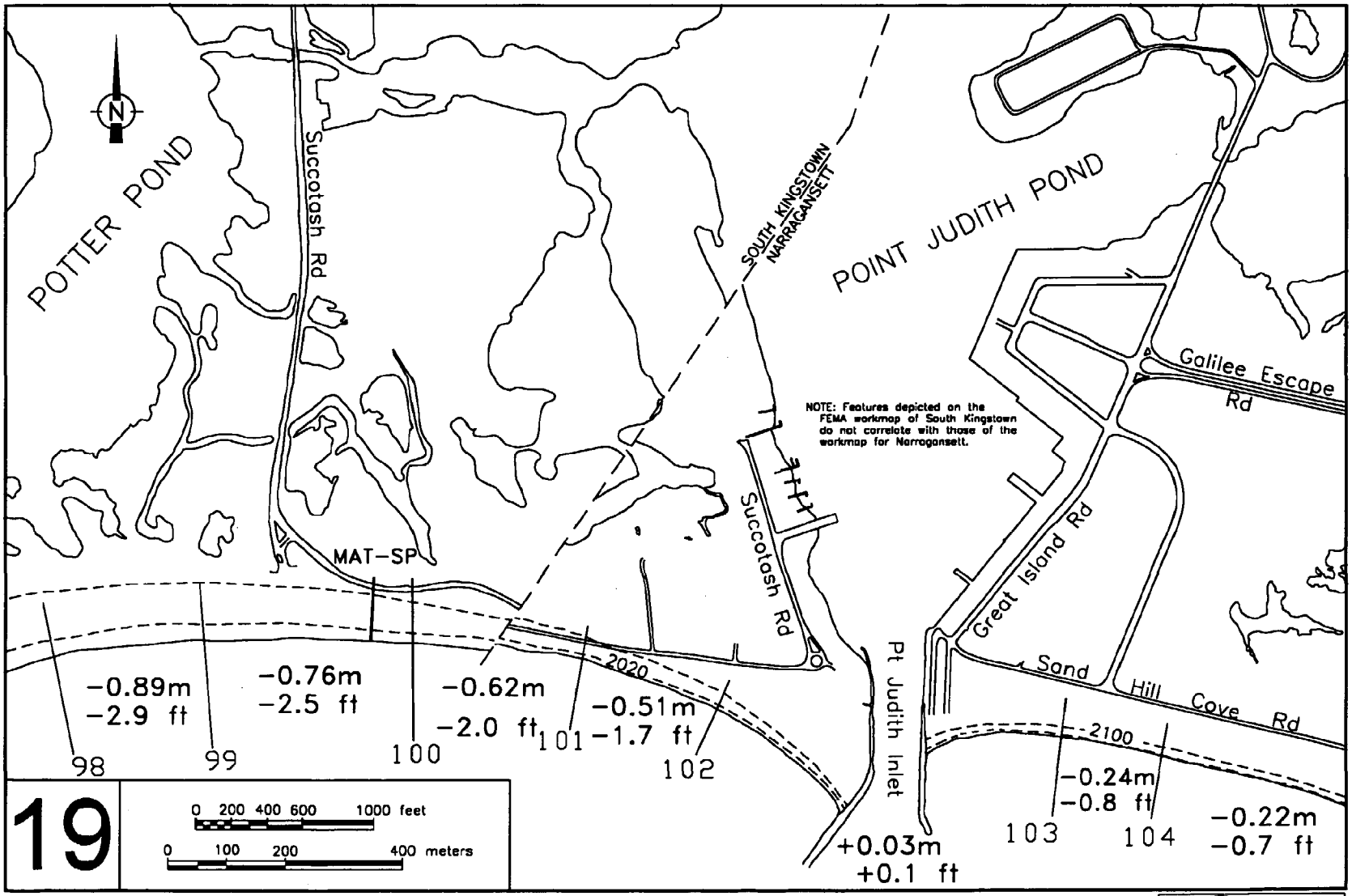

Moonstone Beach Rd
Cards Pond Rd
CARD POND
TRUSTOM POND
N
MST-01
2100
2020
-0.28m
-0.9 ft
-0.19m
-0.6 ft
-0.17m
-0.6 ft
0.0
85
86
87
88
89
b
h
0 200 400 600 1000 feet
0 100 200 400 meters
16
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995

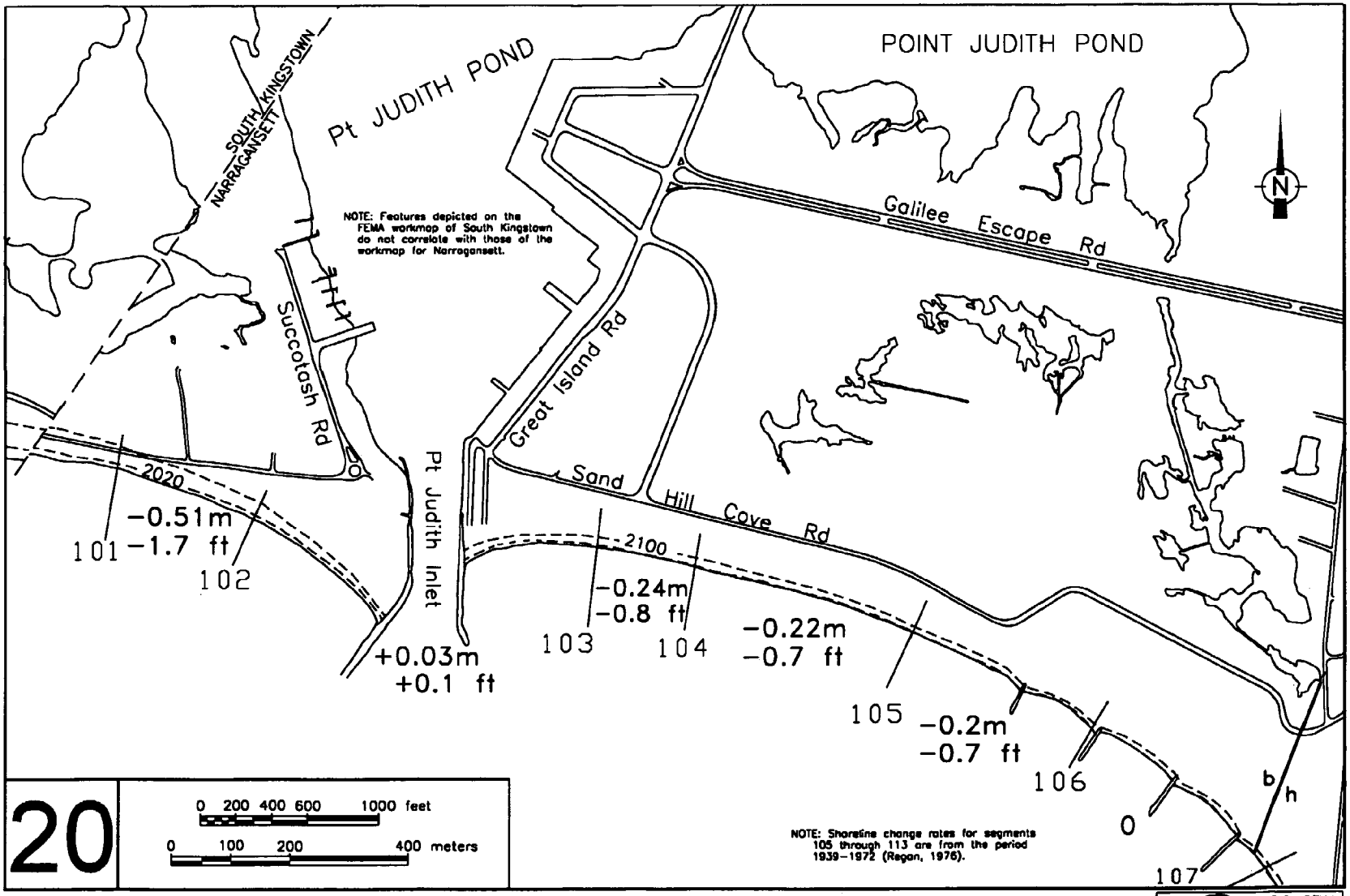

N
South Weeden Rd
Matunuck Beach Rd
Washington St
Lake Ave
Park Ave
Atlantic Ave
Segar Cove
Cards Pond Rd
Access Rd
Prospect Rd
Seaweed Cove
CARD POND
2100
2020
b
h
-0.17m
-0.6 ft
-0.30m
-1.0 ft
-0.32m
-1.0 ft
-0.11m
-0.4 ft
0.24m
0.8 ft
88
89
90
91
92
93
0 200 400 600 1000 feet
0 100 200 400 meters
17
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995

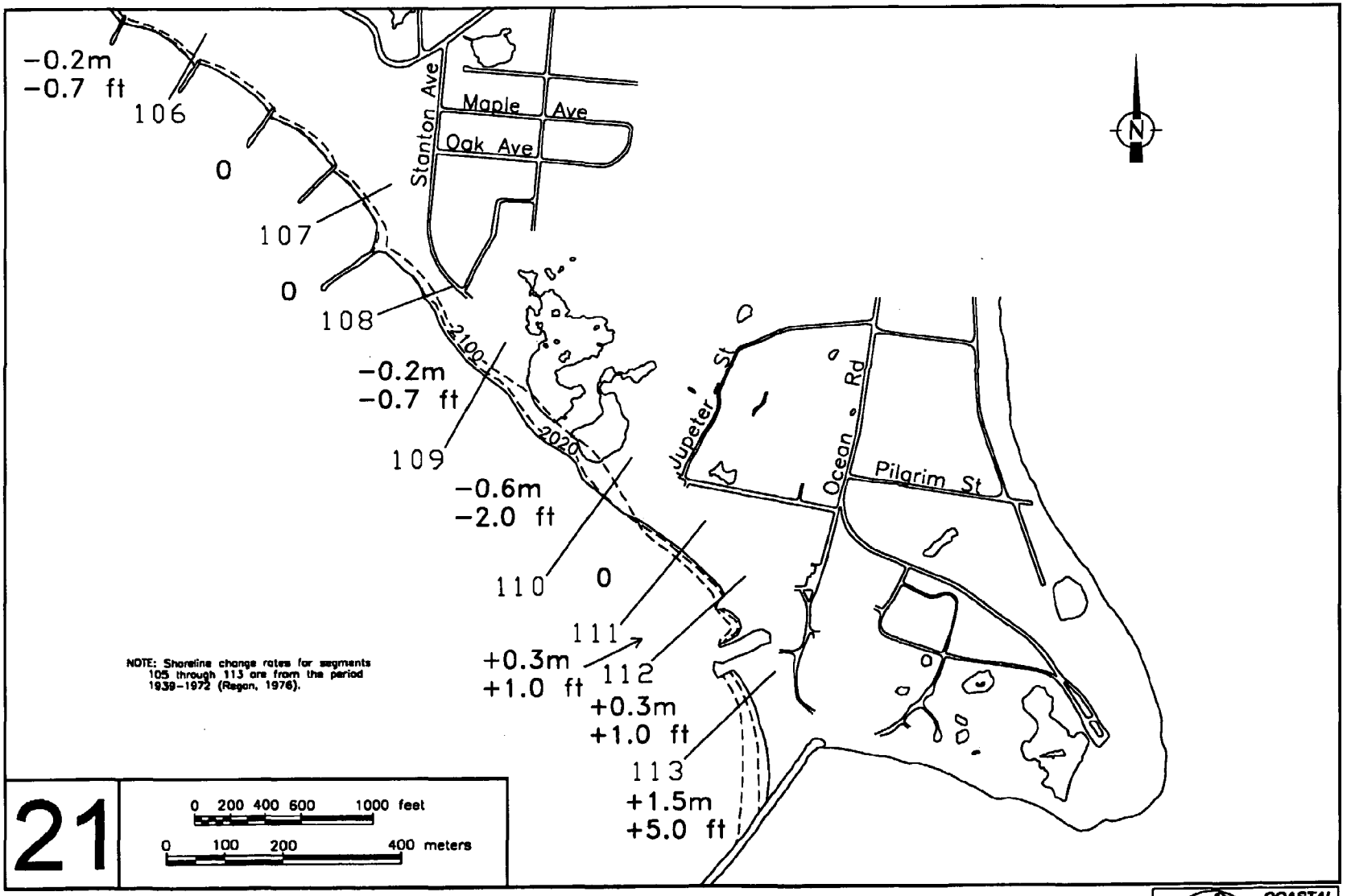


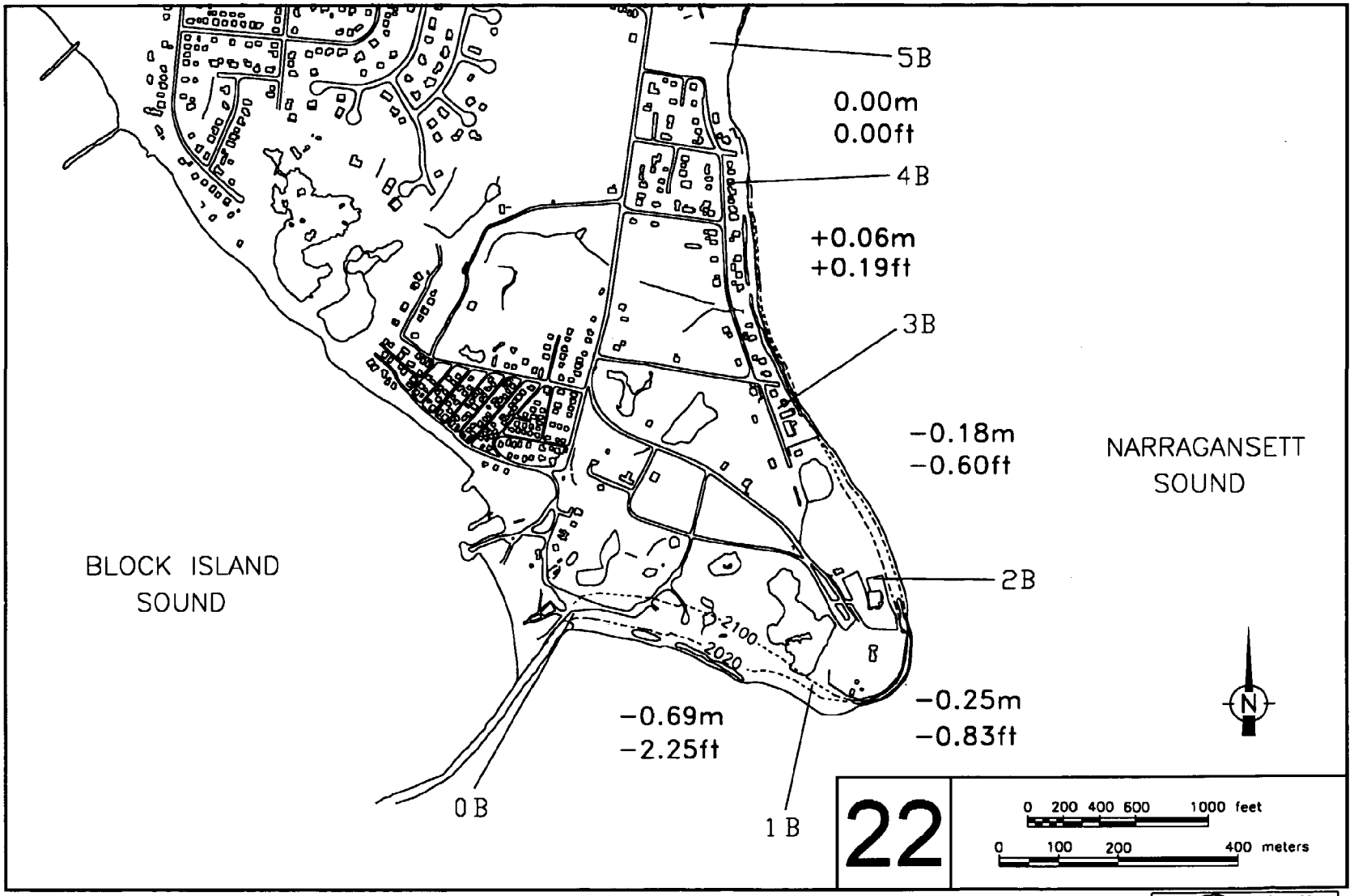
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

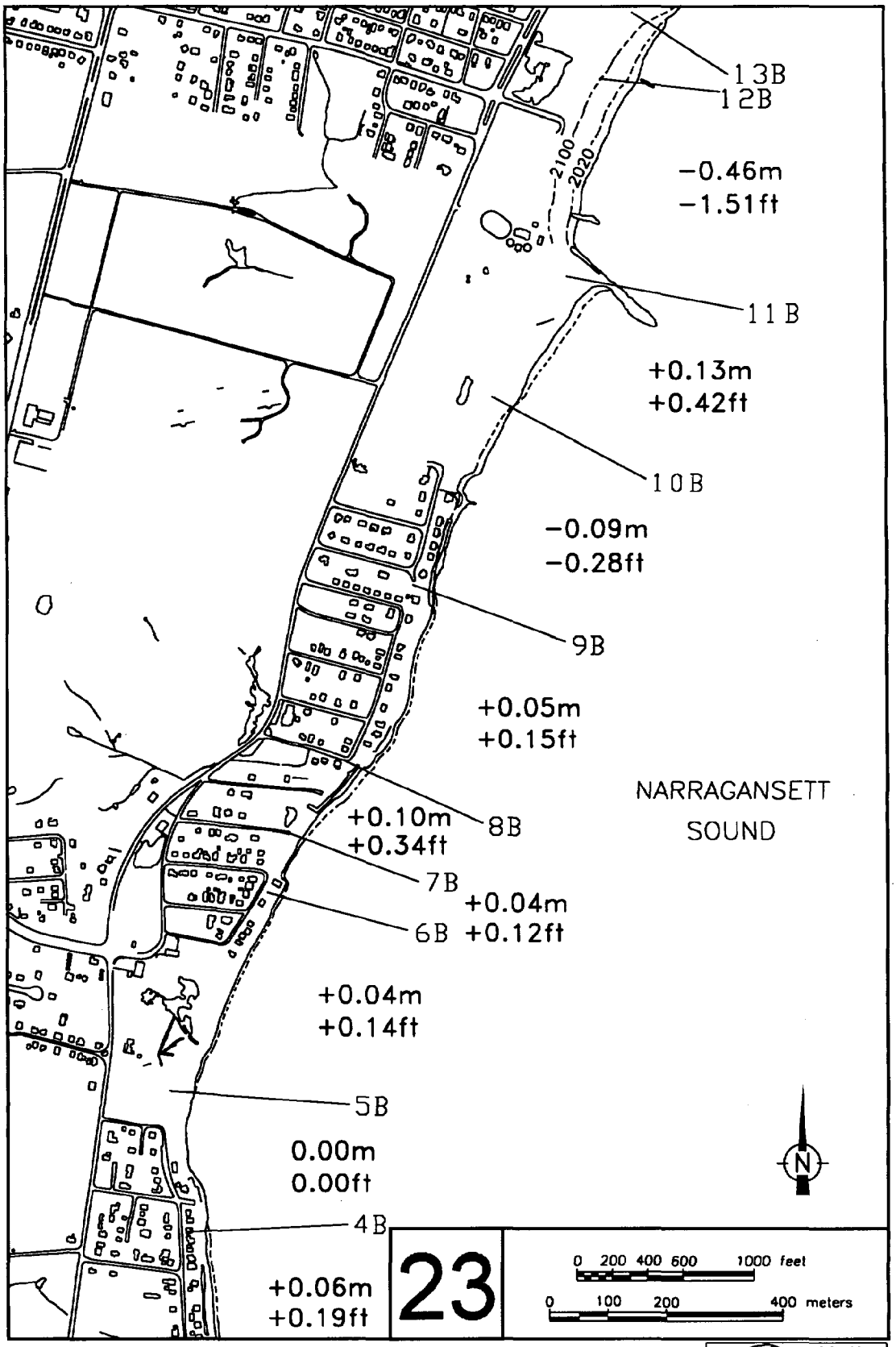
Boothroyd & Galagan, 1995


N
POTTER POND
Succotash Rd
SOUTH KINGSTOWN
NARRAGANSETT
POINT JUDITH POND
Galilee Escape Rd
NOTE: Features depicted on the FEMA workmap of South Kingstown do not correlate with those of the workmap for Narragansett.
Succotash Rd
MAT-SP
Great Island Rd
Sand Hill Cove Rd
2020
2100
Pt Judith Inlet
-0.89m
-2.9 ft
-0.76m
-2.5 ft
-0.62m
-2.0 ft
-0.51m
-1.7 ft
-0.24m
-0.8 ft
-0.22m
-0.7 ft
+0.03m
+0.1 ft
98
99
100
101
102
103
104
19
0 200 400 600 1000 feet
0 100 200 400 meters
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995


POINT JUDITH POND
Pt JUDITH POND
SOUTH KINGSTOWN
NARRAGANSETT
NOTE: Features depicted on the FEMA workmap of South Kingstown do not correlate with those of the workmap for Narragansett.
Galilee Escape Rd
Succotash Rd
Great Island Rd
Sand Hill Cove Rd
Pt Judith Inlet
2020
2100
101
-0.51m
-1.7 ft
102
+0.03m
+0.1 ft
103
-0.24m
-0.8 ft
104
-0.22m
-0.7 ft
105
-0.2m
-0.7 ft
106
107
b
h
0
N
20
0 200 400 600 1000 feet
0 100 200 400 meters
NOTE: Shoreline change rates for segments 105 through 113 are from the period 1939–1972 (Regan, 1976).
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995

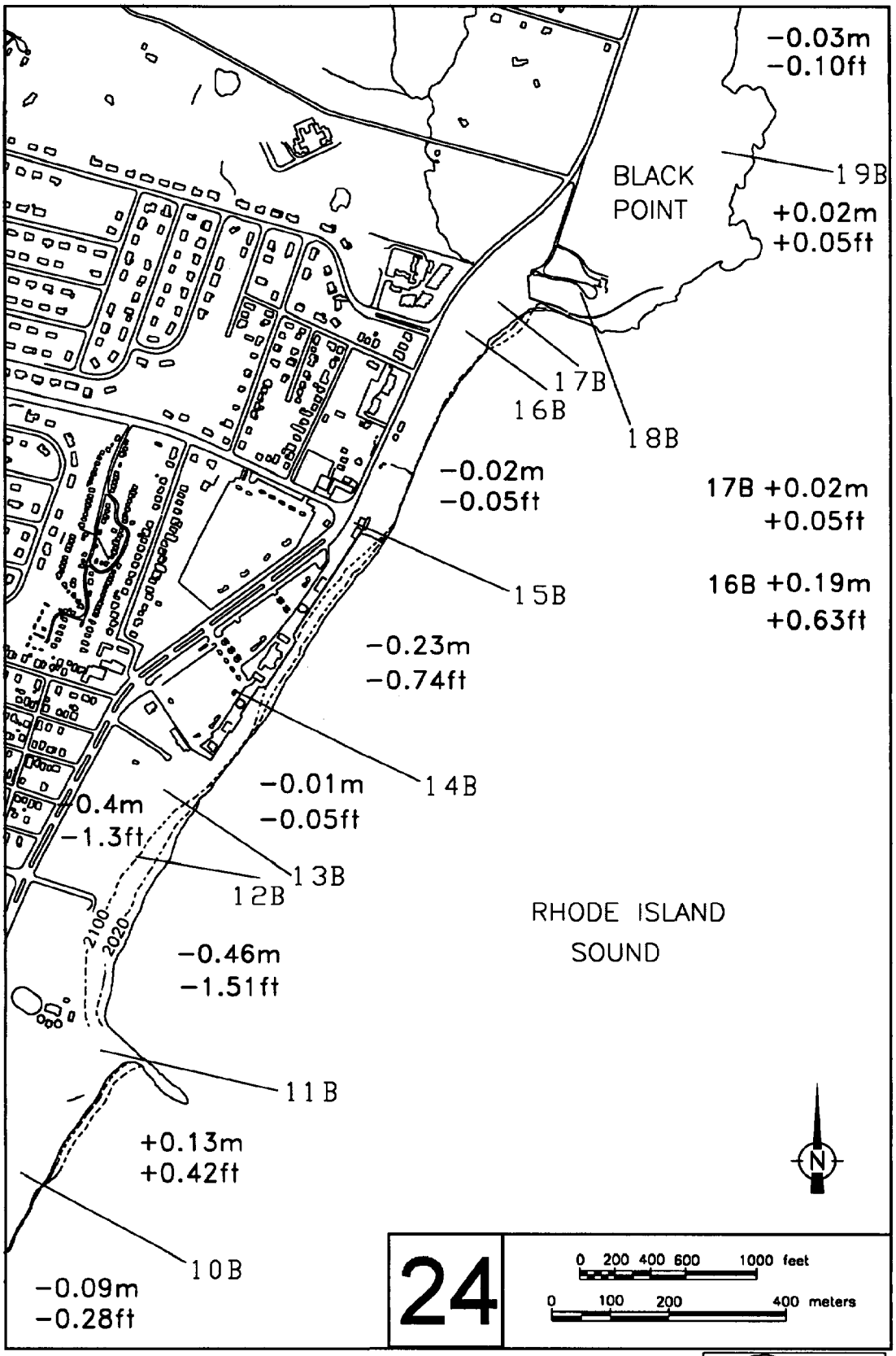

-0.2m
-0.7 ft
106
0
107
0
108
2100
-0.2m
-0.7 ft
109
2020
-0.6m
-2.0 ft
110
0
111
+0.3m
+1.0 ft
112
+0.3m
+1.0 ft
113
+1.5m
+5.0 ft
Stanton Ave
Maple Ave
Oak Ave
Jupeter St
Ocean Rd
Pilgrim St
N
NOTE: Shoreline change rates for segments 105 through 113 are from the period 1939-1972 (Regan, 1976).
21
0 200 400 600 1000 feet
0 100 200 400 meters
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Galagan, 1995


5B
0.00m
0.00ft
4B
+0.06m
+0.19ft
3B
−0.18m
−0.60ft
NARRAGANSETT
SOUND
BLOCK ISLAND
SOUND
2B
2100
2020
−0.25m
−0.83ft
−0.69m
−2.25ft
0B
1B
N
22
0 200 400 600 1000 feet
0 100 200 400 meters
COASTAL
HAZARDS
GROUP
DEPT GEOLOGY
URI
Boothroyd & Harwood, 1995



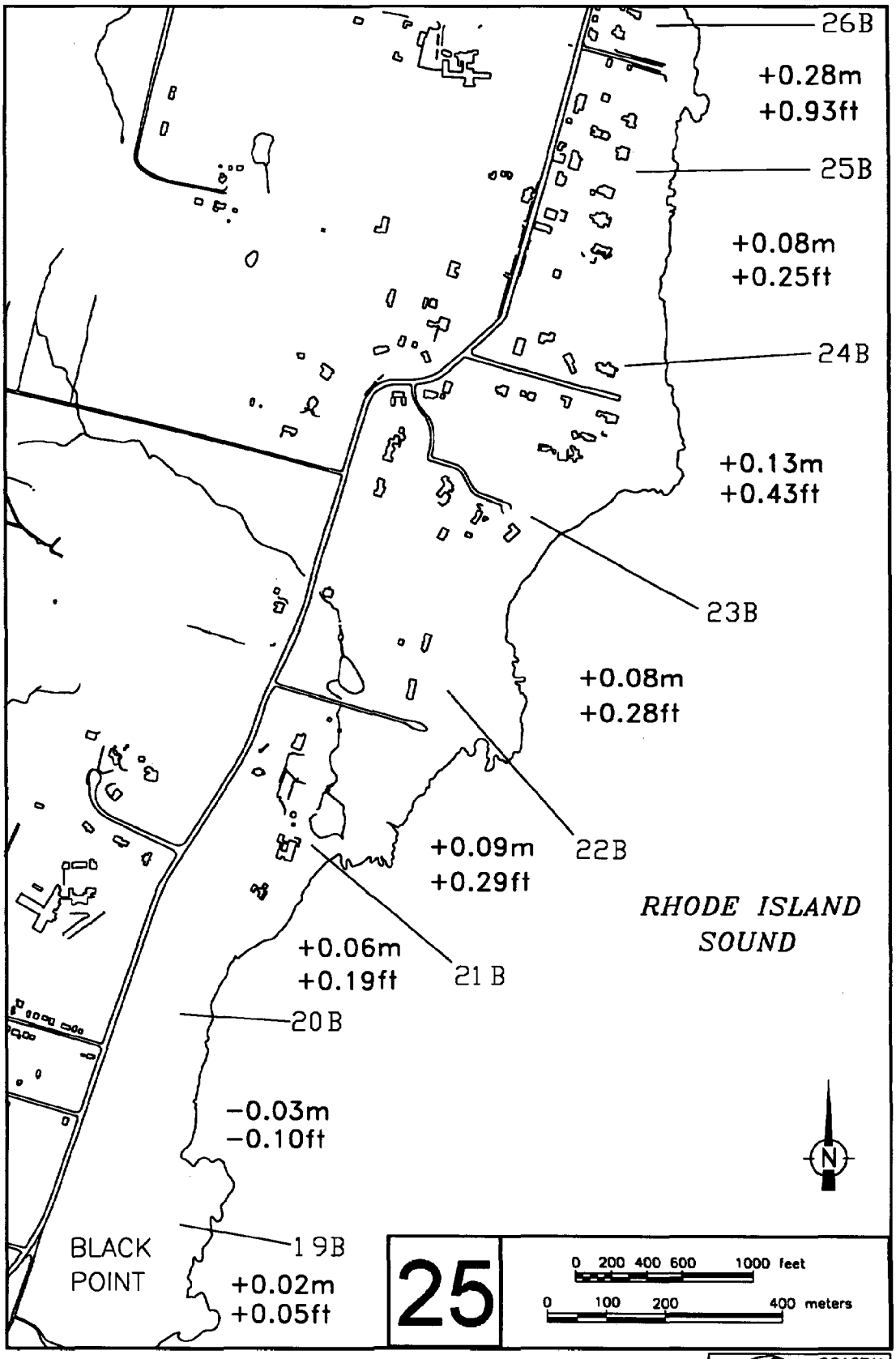
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

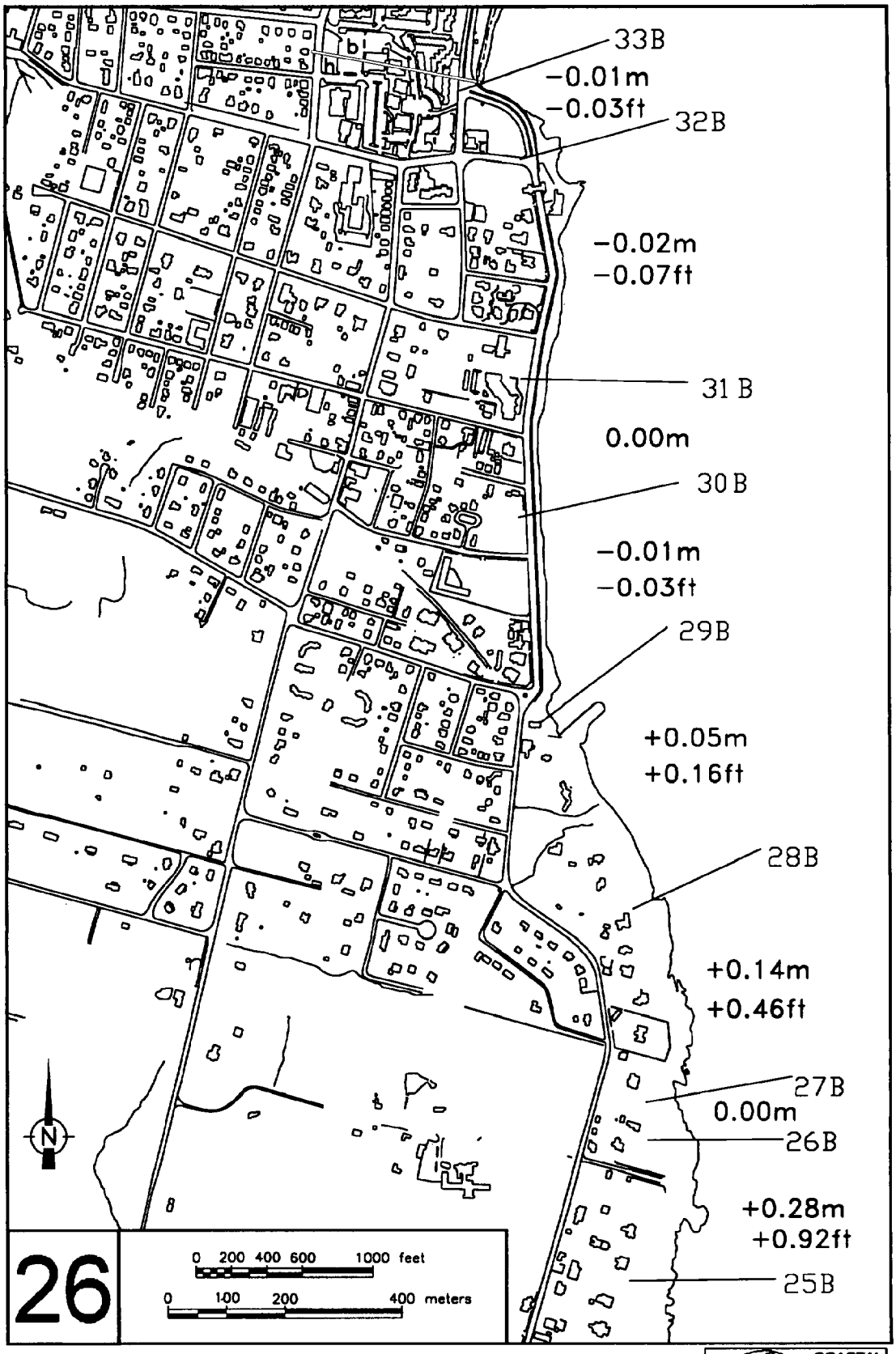
Boothroyd & Harwood, 1995



COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

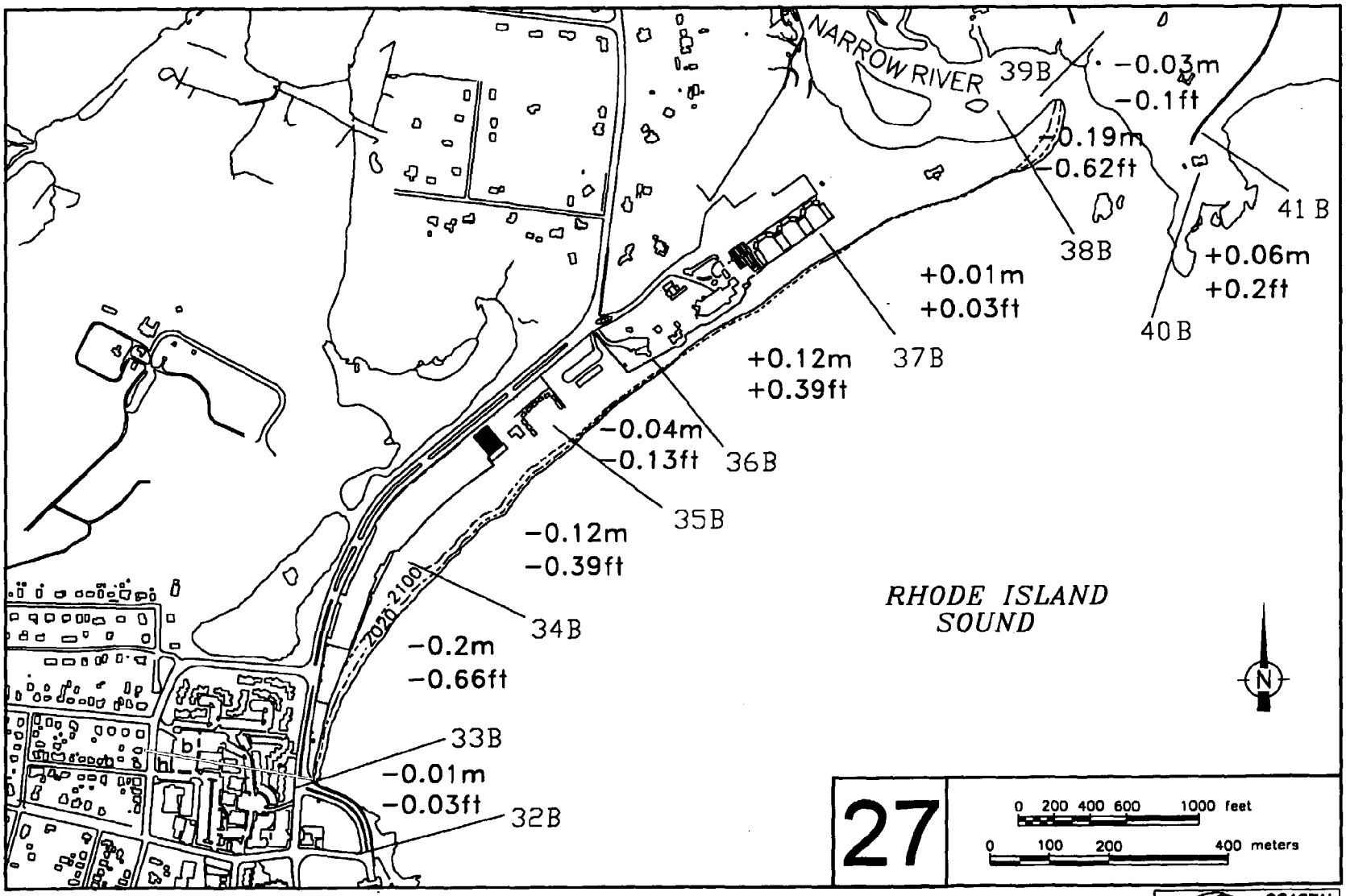
Boothroyd & Harwood, 1995


26B
+0.28m
+0.93ft
25B
+0.08m
+0.25ft
24B
+0.13m
+0.43ft
23B
+0.08m
+0.28ft
22B
+0.09m
+0.29ft
RHODE ISLAND
SOUND
+0.06m
+0.19ft
21 B
20B
−0.03m
−0.10ft
BLACK
POINT
19B
+0.02m
+0.05ft
25
0 200 400 600 1000 feet
0 100 200 400 meters
N
COASTAL
HAZARDS
GROUP
DEPT GEOLOGY
URI
Boothroyd & Harwood, 1995



COASTAL HAZARDS GROUP
DEPT GEOLOGY URI

Boothroyd & Harwood, 1995


NARROW RIVER
39B
-0.03m
-0.1ft
-0.19m
-0.62ft
38B
41 B
+0.06m
+0.2ft
40B
+0.01m
+0.03ft
37B
+0.12m
+0.39ft
36B
-0.04m
-0.13ft
35B
-0.12m
-0.39ft
2020 2100
34B
-0.2m
-0.66ft
33B
-0.01m
-0.03ft
32B
RHODE ISLAND
SOUND
N
27
0 200 400 600 1000 feet
0 100 200 400 meters
COASTAL HAZARDS GROUP
DEPT GEOLOGY URI
Boothroyd & Harwood, 1995